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The effects of extended wear soft contact lenses on contrast sensitivity

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Abstract

This study was conducted to evaluate the long-term effects of soft contact lens extended wear on visual function as measured by contrast sensitivity . Contrast sensitivity measurements were taken at 6 spatial frequencies on 39 subjects when corrected with spectacle lenses and extended wear so f t lenses . The three types of contact lenses used (CS I-T, Hydrocurve II-55, Permaflex) represented low (38%), medium (55%), and high (74%) water content s . Measured amounts of residual refractive error were corrected using a trial frame and lenses and a Clason slide and projector was used to obtain a more precise determination of Snellen acuity. All subjects had vision correctable to 20/20 or better. Data were taken on nine occasions during a five month period to investigate the effect of time upon contrast sensitivity. Two way analysis of variance for repeated measures revealed statistically significant decreases in contrast sensitivity at several of the spatial frequencies tested, or all three lens types used. Although a combined effect of the cornea and the contact lens was present in some cases, the chief cause for this decrease was the cornea.

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THE EFFECTS OF EXTENDED WEAR SOFT CONTACT LENSES ON CONTRAST SENSITIVITY

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Gary L. Slater, O.D.

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ABSTRACT

This study was conducted to evaluate the long-term effects of soft contact lens extended wear on visual function as measured by contrast sensitivity. Contrast sensitivity measurements were taken at 6 spatial frequencies on 39 subjects when corrected with spectacle lenses and extended wear soft lenses. The three types of contact lenses used (CSI-T, Hydrocurve II-55, Permaflex) represented low (38%), medium (55%), and high (74%) water contents. Measured amounts of residual refractive error were corrected using a trial frame and lenses and a Clason slide and projector was used to obtain a more precise determination of Snellen acuity. All subjects had vision correctable to 20/20 or better. Data were taken on nine occasions during a five month period to investigate the effect of time upon contrast sensitivity. Two way analysis of variance for repeated measures revealed statistically significant decreases in contrast sensitivity at several of the spatial frequencies tested, for all three lens types used. Although a combined effect of the cornea and the contact lens was present in some cases, the chief cause for this decrease was the cornea.

KEY WORDS: Contrast sensitivity, spatial frequency, contrast sensitivity function (CSF), soft contact lenses, extended wear.

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INTRODUCTION

In 1984 the U.S. Navy conducted a pilot program to determine the feasibility of using extended wear soft lenses by submarine personnel.[1] This program was instituted to facilitate the use of the periscope by eliminating the recurrent need to remove spectacles and focus the eyepiece. It was hoped that the use of contact lenses would increase the efficiency and accuracy of periscope use without creating additional problems. Extended wear soft lenses were chosen for this program to provide maximum readiness of personnel.

The results of this pilot study indicated that contact lens wear did indeed facilitate periscope operation. Although not all personnel were able to wear the soft contact lenses, those who were successful reported increased efficiency and accuracy with periscope use. Questions concerning the longer term effects of these lenses on ocular health and visual performance are now being considered for these successful wearers.

While in a Navy funded educational program, this study was conducted to evaluate the long-term effects soft contact lens extended wear on visual capability as measured by contrast sensitivity. Contrast sensitivity measurements obtained with spectacle correction were compared with those obtained with three different soft lenses, representing low (38%), medium (55%), and high (74%) water contents. This study also attempted to determine which particular aspect of the optical system (cornea, contact lens, or a combination) is

responsible for changes in contrast sensitivity, if changes do occur.

In evaluating visual capability, eye care practitioners have relied on measures of Snellen acuity as their standard. Patients with 20/20 acuity are generally considered to have good vision even though they may have vague complaints about their visual performance. Some researchers feel this is a common occurrence among contact lens wearers.[2-5] These complaints are often manifested more readily under specific viewing situations such as driving in the rain or focusing a camera at dusk.[6] Consequently, there has been increased interest in the use of contrast sensitivity measurements to help explain these occurrences.[7,8]

In discussing contrast sensitivity, it is helpful to distinquish this type of evaluation from the more traditional Snellen chart. A Snellen chart is a good measure of visual acuity (resolution) but not of contrast sensitivity.[6,9] Resolution on a Snellen chart deals with the discernment of variable size letters at maximum contrast: black with sharp borders on a white background.

Contrast sensitivity testing evaluates the eye's response to changes in contrast between the object and its background as well as the size of the object. Its usefulness becomes apparent when we consider those visual conditions, such as driving in the rain, which could cause lowered discrimination of large objects with poor contrast to a greater degree than the ability to discern smaller objects with high contrast.[6]

Several investigators have reported a reduction in

contrast sensitivity during soft contact lens wear compared to that with spectacle lens wear.[10-12] Inconsistencies have been pointed out in the patient samples in these studies, however, suggesting that further work is needed in this area.[2,4]

A recent study by Teitelbaum, et al., examined the effect of different polymers of soft lenses of varying water content on the contrast sensitivity function (CSF).[4] They found no statistically significant differences in contrast sensitivity between the three types of lenses. This study, however, entailed only fifteen minutes of lens wear prior to the contrast sensitivity measurements. A long-term study comparing CSF changes with different lenses has not been reported in the literature.

Kirkpatrick and Roggenkamp, in 1985, studied the effects of daily wear soft contact lenses on contrast sensitivity.[13] They were concerned not only with the correlation between possible changes in contrast sensitivity and soft contact lens wear, but also with the particular aspect of the optical system(contact lens or cornea) that may be responsible for this effect. The optical component, one of two components that comprise the contrast sensitivity function, affects the quality of the retinal image.[14] The second is the neural component which affects the processing of information within the retina and visual pathways. Abnormalities of contrast sensitivity in healthy contact lens patients are assumed to be a defect within the optical system.[13,14]

New aspects considered in this study were the types of lenses used, the length of time under study, and the size of

the subject group. Previous investigators have repeatedly expressed a need for longer term studies using larger subject groups to more accurately determine the the effects of contact lens wear on contrast sensitivity.

SIGNIFICANCE OF STUDY

In 1978 Geoffrey Arden was one of the first investigators to establish the clinical significance of the contrast sensitivity function.[15] He first used this measure to study the effects of glaucoma on visual performance. Using photographically prepared plates of specific spatial frequencies with varying contrast, Arden was able to measure contrast sensitivity in a clinical setting. Prior to Arden's work, testing was limited to the research laboratory, because of the complex apparatus required. Most of this research dealt with the verification of its use as a diagnostic tool in the detection of ocular pathology.[16] Because this is a relatively new clinical tool, few studies have been undertaken to analyze the effects of contact lens wear on contrast sensitivity. The value of such a study becomes apparent when we consider the rapidly growing interest and use of extended wear lenses. In addition, the question of how different lenses affect contrast sensitiivity has not been adequately answered.[4] Different lenses possess different structural and physical properties such as thickness, permeability, water content, base curve and dehydration characteristics, many of which are subject to change with time. With the growing number of lenses available today, a comparison of their effect on contrast sensitivity may have clinical significance. The clinical implications may be even more relevant in extended wear fittings where the factors that affect soft lens contrast sensitivity could be magnified.[4]

Applegate and Massof(1975) were the first researchers to

consider how contact lens wear affects the optical component of the contrast sensitivity function.[12] Kirkpatrick and Roggenkamp, in 1985, were next to consider what aspect of the optical system(contact lens or cornea) is responsible for possible changes in CSF during soft lens wear.[13] The importance of determining the etiology of these changes, if any, has been established and will be considered in this study.

Recognizing the limitations of Snellen acuity measurements, investigators[17-21] have begun encouraging practitioners to consider the measurement of contrast sensitivity as an additional visual performance test. This technique expands visual evaluations from an acuity measurement alone to a more extensive appraisal of visual information processing.

The basic testing component of contrast sensitivity is the presentation of sine wave gratings to the patient. Comerford(1979) listed several different techniques for producing sine wave gratings: laser interference patterns, CRT displays, slide projection, and Arden plates.[9] The most preferred technique in recent research appears to be the use of cathode ray tube(CRT) displays.[2]

Relatively few studies have been undertaken of contact lens wear and its effect on the contrast sensitivity function(CSF). The studies that have been performed often appear contradictory.

Applegate and Massof were the first to study the effect of contact lens wear on the optical component of the CSF.[12] They found a decreased sensitivity at the intermediate spatial frequencies(2-4 cycles/degree) in subjects wearing early series Bausch & Lomb hydrogel lenses (38% water content) as compared with spectacles. The test population, however, consisted of only three subjects. The residual refractive error was not corrected. When the residual error was later corrected, there was no significant change in the CSF.

Woo and Hess(1979) examined three contact lens wearers in

which only one complained of reduced vision while wearing the lenses.[10] The two asymptomatic wearers showed no reduction in contrast sensitivity, while the subject who did complain of reduced vision showed a marked decrease across the range of spatial frequencies. The decrease was greater for the higher frequencies. No information regarding visual acuity, lens type, or residual refractive error was given. The decrease in sensitivity was suggested to be an aberration effect not detected by Snellen acuity.

Bernstein and Brodrick(1981) set out to replicate the findings of Applegate and Massof.[22] Nine subjects were tested, each corrected to 20/20 acuity or better with Bausch & Lomb soft lenses. CSF measurements were taken at two-hour intervals over a single 18 hour period. One eye was fitted with a soft lens and the other eye was corrected with spectacles to serve as a control. They found no significant changes in the CSF for patients wearing the Bausch & Lomb lenses.

Mitra and Lamberts(1981) tested the contrast sensitivity of 12 subjects wearing B3 and U3 series Bausch & Lomb soft lenses.[11] Contrast sensitivity was measured with their spectacle corrections in place and then 30 to 60 minutes following their soft lens fittings. The CSF test was repeated approximately two weeks following the initial fitting. All subjects obtained at least 20/20 vision with both glasses and contact lenses. Their results agreed with the conclusion reached by Applegate and Massof.[12] They found decreased contrast sensitivity over nearly all spatial frequencies with

contact lens wear as compared to spectacle lens wear.

Kirkpatrick and Roggenkamp(1985) used the Nicolet Optronics CS2000 vision testing system to test 19 subjects when corrected with either spectacles or soft lenses.[13] Visual acuity was correctable to 20/20 or better with both spectacles and soft lenses, with measured amounts of residual refractive error corrected during the testing. Five different soft lenses were used but were not analyzed separately (CSI, Durasoft II, Hydron, Hydrocurve II, and B&L). Contrast sensitivity testing was done prior to and following contact lens fitting. Additional testing was done at one and four weeks after this initial testing. They found a lowered CSF with soft contact lenses for only the highest spatial frequency tested (22.8 cycles/degree). They concluded that the responsibility for this decrease was shared by both the contact lens and the cornea.

Tomlinson and Mann(1985) also used the Nicolet Optronics CS2000 to test 10 subjects wearing soft lens and spectacle corrections.[3] All subjects were habitual wearers of soft contact lenses (38% and 55% water content) and all obtained at least 20/20 acuity with both contact lens and spectacle correction. They found a statistically significant, superior visual function with the lathe-cut soft lenses when compared to spectacle correction. However, they felt the difference in threshold values obtained with the two forms of visual correction was probably not clinically significant as defined by a 0.02 log unit difference.

The most recent research in this area was conducted by

Teitelbaum, et al. (1985) on 12 subjects adapted to contact lens wear.[4] Contrast sensitivities obtained with spectacle correction were compared with those obtained with three hydrogel lenses of different polymer. They concluded that the lens type did not differentially affect contrast sensitivity by a clinically or statistically significant amount. This was in the absence of lens induced corneal edema, lens deposits, or structural and physical changes of the lens. They stated, however, that for longer wearing periods, especially with extended wear lenses, where these factors may be present, the CSF may be affected.

The published research to date has not resolved the question of how soft contact lenses affect contrast sensitivity. Possible reasons for conflicting results include a failure to take residual astigmatism into account, differences in experimental design and instrumentation, failure to use appropriate statistical analysis, the use of different contact lenses, and generalizing from small numbers of subjects.[4,13]

HYPOTHESIS

This study considered the hypothesis that contrast sensitivity, for a group of newly fit extended wear soft contact lens patients, would show a significant decrease, with time, when compared to prefit contrast sensitivities with spectacles. If CSF decreased over time, responsibility for the decrease could be attributed to either the contact lens, the cornea, or a combination of the contact lens and the cornea. Contrast sensitivity measurements were taken with both spectacle correction and contact lens correction during each visit to analyze these possibilities. They are represented diagrammatically in Figure 1.

Figure 1A represents the first possibility. It shows a significant decrease in contrast sensitivity with contact lenses, but no significant change with spectacles. In this case the contact lens would be responsible for the decrease.

The second possibility is represented in figure 1B. It shows an equally significant decrease in contrast sensitivity when both contact lenses and spectacles are worn. In this case the cornea is considered responsible for the decrease.

The third possibility indicates a combined effect from both the contact lens and the cornea. Figure 1C shows a significant decrease in contrast sensitivity with spectacles and a greater decrease with contact lenses. The decrease during spectacle lens wear is attributed to the cornea, while incremental decrease between the spectacle lens and contact lens is attributed to the contact lens.

Measurements of CSF with contact lenses and spectacles were, therefore, made at each progress evaluation during the

course of the study. The hypothesis was accepted if there was a significant decrease in contrast sensitivity for any of the spatial frequencies tested when contact lenses were worn. It was rejected if a significant decrease did not occur.

Adequate and appropriate statistical analysis of the data was used to determine the significance of any changes in contrast sensitivity. The use of a statistically significant subject group, a long-term testing period, and appropriate analysis of the data, was an effort to avoid some of the limitations found in past research. These limitations, at least in part, were considered as possible explanations for conflicting results in prior studies.

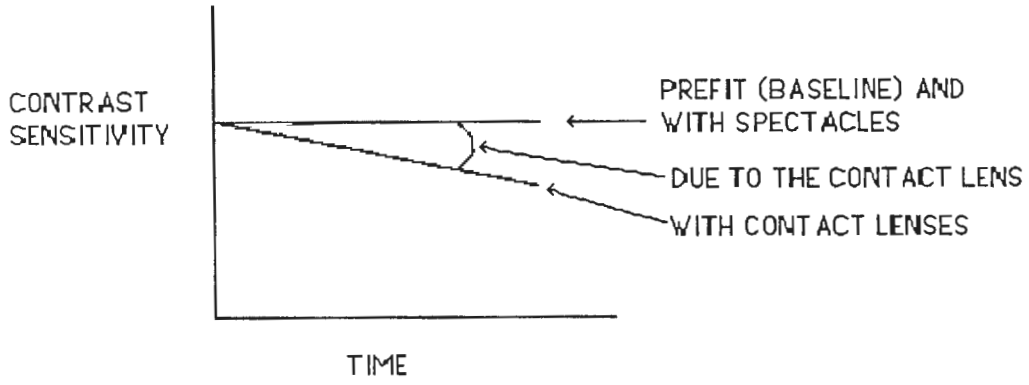

Figure 1A: Decrease in contrast sensitivity due to the contact lens.

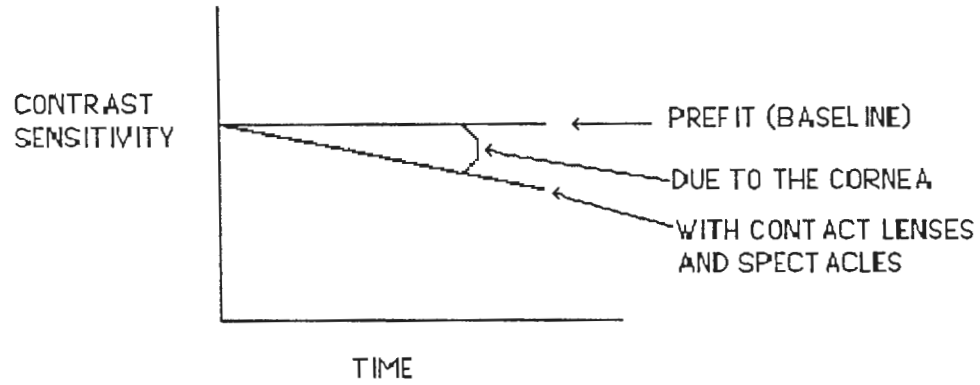

Figure 1B: Decrease in contrast sensitivity due to the cornea.

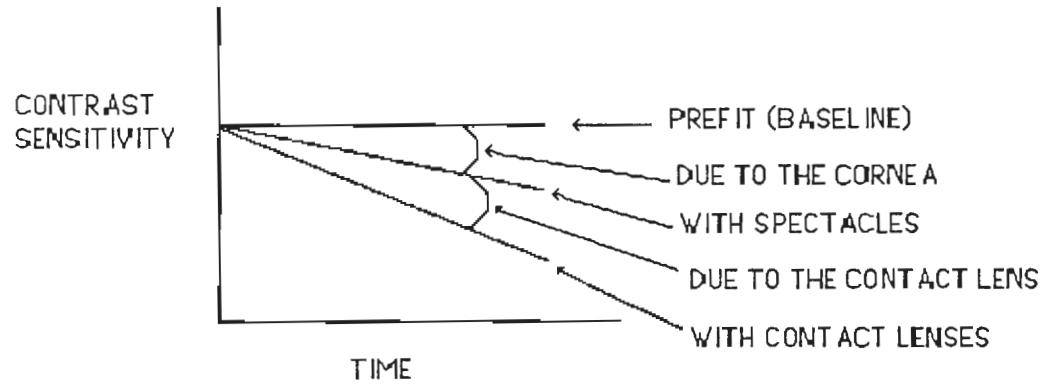

FIGURE 1C: Decrease in contrast sensitivity due to the cornea and the contact lens.

SUBJECTS

Thirty-nine subjects (twenty-five females and fourteen males) were selected for this study following the screening of approximately one hundred subjects. All subjects were selected to meet the criteria needed for three concurrent studies. In addition to contrast sensitivity measurements, the subjects and their lenses were evaluated for permeability changes of their lenses[23], corneal thickness changes[24], and endothelial cell studies[24]. All contrast sensitivity measurements were taken prior to these tests.

An age range of 18 to 35 years was chosen to avoid problems with presbyopia and age related effects on contrast sensitivity.[25,26] This range also served to limit the field of study and match the primary population that would be included in a military contact lens program. Refractive errors were limited to a range from -1.00 to -8.00 diopters. This range was chosen to reduce the effects of high refractive error on contrast sensitivity[27] and still meet our military population requirements. Only three subjects had errors in excess of -5.50 diopters and all refractive errors were spherical or had an astigmatic component of 0.75 diopters or less. Visual acuities were correctable to 20/20 or better with spectacle and contact lens corrections. All subjects had clear media in both eyes and were free from active ocular infections or inflammations. No histories of significant ocular surgery, trauma or pathology were present. Additional subject criteria included good tear break-up time (greater than 10 seconds) and good personal hygiene. Table 1 contains more specific

information about patient age and visual acuity as well as spectacle and contact lens prescriptions for the initial subject population.

Four control subjects, that met the subject criteria outlined above, were utilized in this investigation. More specific information concerning this control group is included in Appendix F.

Table I: Data Describing the Initial Subject Population

SUBJECT	AGE	EYE	SPECTACLE RX	LENS	POWER	B.C.	DIAMETER	Snellen Acuity C/L + Over-Refraction
1	26	OD	-4.75 sph	HCII	-4.50	8.8	14.5	20/18
		OS	-4.50-0.25x010	PF	-4.25	8.7	14.4	20/20
2	28	OD	-1.25 sph	PF	-1.25	8.7	14.4	20/15
		OS	-1.00 sph	HCII	-1.00	9.1	14.5	20/15
3	18	OD	-2.00-050x075	HCII	-2.00	8.8	14.5	20/18
		OS	-2.25-0.25x105	PF	-2.25	8.7	14.4	20/20
4	29	OD	-1.00-0.25x010	HCII	-1.00	8.8	14.5	20/18
		OS	-1.25 sph	PF	-1.00	8.7	14.4	20/18
5	27	OD	-1.25 sph	HCII	-1.25	8.8	14.5	20/17
		OS	-1.25 sph	CSI-T	-1.25	8.6	13.8	20/17
6	31	OD	-2.75 sph	HCII	-3.00	8.5	14	20/13
		OS	-2.75-0.25x008	PF	-2.75	8.7	14.4	20/13
7	22	OD	-2.00 sph	CSI-T	-2.00	8.6	13.8	20/20
		OS	-2.00 sph	HCII	-2.00	8.8	14.5	20/18
8	21	OD	-5.75-0.25x065	HCII	-5.75	8.8	14.5	20/14
		OS	-5.00-0.25x090	PF	-5.25	8.7	14.4	20/14
9	28	OD	-1.50-0.25x007	HCII	-2.00	8.8	14.5	20/18
		OS	-1.75-0.25x003	CSI-T	-1.75	8.9	14.8	20/18
10	19	OD	-3.25-0.25x180	CSI-T	-3.50	8.9	14.8	20/17
		OS	-3.75 sph	HCII	-3.75	8.8	14.5	20/17

Table I: Data Describing the Initial Subject Population

SUBJECT	AGE	EYE	SPECTACLE RX	LENS	POWER	B.C.	DIAMETER	Snellen Acuity C/L + Over-Refraction
11	31	OD	-1.75 sph	CSI-T	-2.00	8.6	13.8	20/15
		OS	-2.50 sph	HCII	-2.50	8.8	14.5	20/15
12	30	OD	-4.75 sph	PF	-4.50	8.7	14.4	20/17
		0S	-5.50 sph	HC II	-5.50	8.8	14.5	20/17
13	26	OD	-2.50-0.25x010	HCII	-2.75	8.8	14.5	20/15
		OS	-3.00-0.25x180	PF	-3.00	8.7	14.4	20/15
14	29	OD	-2.25 sph	PF	-2.25	8.7	14.4	20/18
		OS	-2.00 sph	HCII	-2.00	8.8	14.5	20/17
15	25	OD	-1.50 sph	HCII	-1.50	9.1	14.5	20/18
		OS	-1.00 sph	PF	-1.00	8.9	14.4	20/18
16	31	OD	-3.25 sph	CSI-T	-3.25	8.6	14.8	20/17
		OS	-3.25-0.25x035	PF	-3.25	8.7	14.4	20/18
17	32	OD	-3.25-0.25x005	HC II	-3.25	8.8	14.5	20/20
		OS	-3.25-0.25x010	PF	-3.25	8.7	14.4	20/18
18	24	OD	-5.75-0.25x180	HCII	-6.00	9.1	14.5	20/17
		OS	-6.50-0.50x005	CSI-T	-7.00	9.35	14.8	20/17
19	34	OD	-2.25 sph	CSI-T	-2.25	8.6	13.8	20/18
		OS	-1.50 sph	HCII	-1.50	8.8	14.5	20/18
20	26	OD	-3.50-0.25x075	HCII	-3.75	8.5	14	20/20
		OS	-4.00-0.25x120	PF	-3.75	8.7	14.4	20/20

Table I: Data Describing the Initial Subject Population

SUBJECT	AGE	EYE	SPECTACLE RX	LENS	POWER	B.C.	DIAMETER	Snellen Acuity C/L + Over Refraction
21	26	OD	-2.00-0.25x090	HCII	-2.25	8.8	14.5	20/17
		OS	-3.00-0.25x085	CSI-T	-3.25	8.6	13.8	20/17
22	22	OD	-2.25-0.50x100	HCII	-2.50	8.5	14	20/17
		OS	-3.50 sph	PF	-3.50	8.7	14.4	20/17
23	29	OD	-1.25-0.25x090	HCII	-2.00	8.8	14.5	20/20
		OS	-1.50 sph	CSI-T	-1.50	8.6	14.8	20/20
24	21	OD	-4.25-0.25x090	HCII	-4.50	8.8	14.5	20/17
		OS	-4.00-0.25x090	PF	-4.00	8.7	14.4	20/17
25	31	OD	-1.25-0.25x150	HCII	-1.50	8.8	14.5	20/17
		OS	-1.50-0.25x030	PF	-1.75	8.7	14.4	20/17
26	26	OD	-1.75 sph	HCII	-1.75	8.8	14.5	20/20
		OS	-1.50 sph	PF	-1.50	8.7	14.4	20/17
27	30	OD	-1.75 sph	CSI-T	-1.75	8.6	13.8	20/17
		OS	-1.50 sph	HC II	-1.50	8.8	14.5	20/17
28	20	OD	-1.25 sph	HC II	-1.25	8.8	14.5	20/17
		OS	-1.75-0.25x175	CSI-T	-2.00	8.6	13.8	20/17
29	34	OD	-3.00 sph	PF	-3.00	8.7	14.4	20/18
		OS	-3.00 sph	HCII	-3.00	8.8	14.5	20/18
30	31	OD	-3.75 sph	CSI-T	-4.00	8.9	14.8	20/15
		OS	-4.00-0.50x180	HCII	-4.25	8.8	14.5	20/15

Table I: Data Describing the Initial Subject Population

SUBJECT	AGE	EYE	SPECTACLE RX	LENS	POWER	B.C.	DIAMETER	Snellen Acuity C/L + Over Refraction
31	31	OD	-4.25-0.25x017	HC II	-4.25	9.1	14.5	20/17
		OS	-3.00 sph	CSI-T	-3.00	8.6	13.8	20/17
32	27	OD	-3.50-0.75x180	HCII	-3.50	8.8	14.5	20/17
		OS	-3.50-0.75x014	CSI-T	-3.75	8.6	14.8	20/17
33	34	OD	-7.25 sph	HCII	-7.00	8.8	14.5	20/14
		OS	-7.00-0.50x015	PF	-6.50	8.7	14.4	20/14
34	35	OD	-2.75 sph	HCII	-2.75	8.8	14.5	20/18
		OS	-2.50 sph	CSI-T	-2.50	8.6	13.8	20/18
35	24	OD	-1.25-0.50x070	HCII	-1.50	8.8	14.5	20/18
		OS	-1.25-0.50x090	PF	-1.50	8.7	14.4	20/18
36	28	OD	-3.25 sph	HCII	-3.25	8.8	14.5	20/17
		OS	-2.75 sph	CSI-T	-2.75	8.6	13.8	20/18
37	18	OD	-1.25 sph	HCII	-1.25	8.8	14.5	20/18
		OS	-1.50 sph	CSI-T	-1.50	8.6	13.8	20/15
38	27	OD	-1.50 sph	PF	-1.50	8.7	14.4	20/20
		OS	-2.25 sph	HCII	-2.25	9.1	14.5	20/18
39	26	OD	-4.25-0.25x020	HCII	-4.25	9.1	14.5	20/18
		OS	-3.75-0.50x165	CSI-T	-3.75	8.9	14.8	20/18

The Nicolet Optoronics CS-2000 Contrast Sensitivity Testing System was used for this study.[28] It became available for clinical use in 1981, eliminating many of the drawbacks of the Arden plates.[6] It consists of an observer response box, a microcomputer control console with keyboard and printer, and a display monitor (Figure 2). It has a built-in calibration system, limiting the need for external photometric calibration and ensuring standard testing conditions from session to session. It can also be photometrically calibrated prior to testing, if desired.

Stationary, flickering, or drifting sine wave grating targets can be generated by the CS-2000. This can be done at various levels of contrast, spatial frequency, and mean luminance. The preprogrammed memory of the CS-2000 allows multiple techniques for test administration. The ascending limits test method was used for this study: the contrast between the light and dark bars is raised until the subject is just able to detect the grating. This measures the relationship between contrast sensitivity and spatial frequency using a sinusoidal luminance profile.

The observer response box allows a subject to signal when a pattern is first detected. This can be done by either (1) pressing a button in response to the increasing contrast of the grating pattern or (2)turning a knob, increasing the contrast until it is just visible. This study utilized the first response method.

All subjects were evaluated at the standard 3 meter test

The CS 2000 System includes a Contrast Sensitivity Display Monitor, Control Console with Keyboard, and an Observer Response Box.

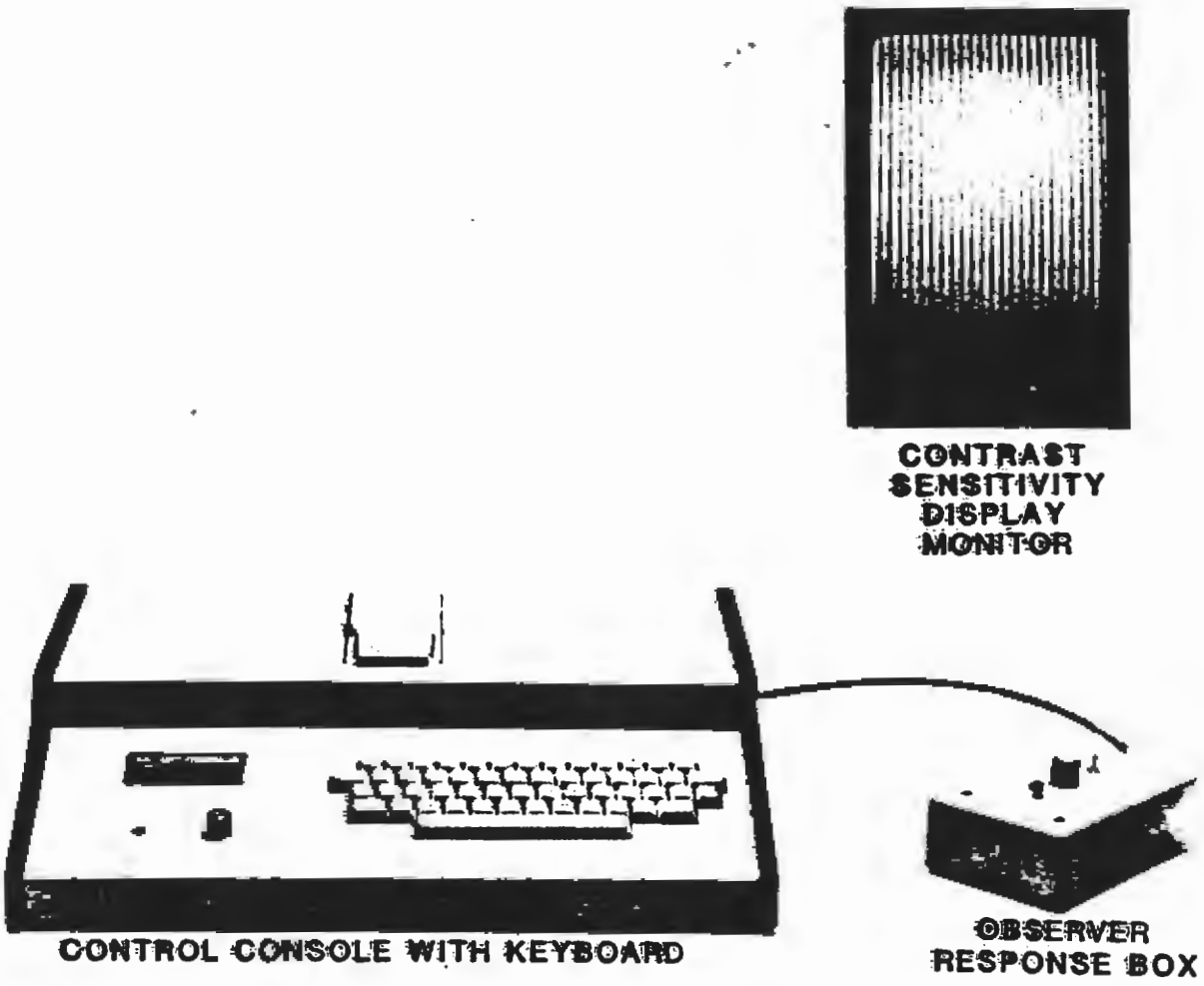

Figure 2. The Nicolet Optronics CS-2000 Contrast Sensitivity Testing System

distance. This distance serves to standardize testing conditions, allowing for more meaningful comparisons of the results. At the 3 meter test distance the display monitor subtends a visual angle of 4.3 degrees horizontally and 5.4 degrees vertically. Proper adjustment of the monitor is necessary to minimize the raster creating as homogeneous a field as possible.

A frosted white plastic surround was used on the monitor to provide uniformity of peripheral and central fields (Figure 3). This surround also allowed a more comfortable transition between the bright monitor and the non-illuminated room.

Figure 3. Subject view of monitor with frosted surround

To increase flexibility, the CS-2000 incorporates three methods of calibration.[28] The standard (default) method sets the display monitor for 100 candelas per square meter average

luminance, and 0.50 peak contrast measured at the screen center. This is a semi-automatic calibration method, designed to keep the instrument set for proper contrast and luminance values over time.

The photometric method allows for the use of an external photometer to calibrate the CS-2000 to specified luminance and contrast values. Verification that the display behaves in a linear fashion at these settings is also possible.

The third, non-standard method of calibration, was used for this study. The display is initially set for the desired contrast and luminance values using the photometric method of calibration. It is then reset to these non-standard values through the use of the non-standard calibration option. Appendix A outlines the instructions for performing the contrast sensitivity testing program using the non-standard method of calibration.

A Tektronix J-16 Photometer with a J6523-2 1^0 narrow angle luminance probe was used to verify the established luminance settings. The mean luminance, based on 5 measurements, was 77.4 candela/meter^2 at the beginning of the study and 77.6 candela/meter^2 at the end of the study. Two measurements taken to evaluate the screen surround gave an mean luminance reading of 25.5 candela/meter^2 at the beginning of the study and 26 candela/meter^2 at the end of the study. There was no change in the ambient luminance of the screen surround which measured 0.1 candela/meter^2 (Appendix B).

The CS-2000 testing program was tailored to this study by using the non-standard test options. To facilitate their use,

these options have been grouped into three general categories: setup, method, and stimuli.[28] The standard setup option was used for all testing. This was recommended by the manufacturer and configured the CS-2000 using default values for test distance(m), screen size(cm), line rate, and peak contrast. The testing distance was 3 meters, the screen size was 22.5cm (width of the display monitor),the line rate was 392, and the peak contrast was 0.5.

The non-standard method option was used to specify which of the four test methods was to be used. A preview of each stimulus pattern was given, using a preview time of five seconds and a preview contrast of 0.2. Following the preview stimulus, each test stimulus was repeated three times. This was a non-standard method, replacing the default value of four.

The number of stimulus trials was set at six using the non-standard stimuli option. Each trial was presented as a single stationary sinusoidal grating in random order as follows: 6.0, 1.2, 4.0, 11.4, and 16.0 cycles/degree (Figure 4). Each test trial was started at .002 contrast level. A trial was repeated if the standard deviation (determined by the instrument) was greater than 0.1.

Prior to contrast sensitivity testing, each subject was given a visual examination in which Snellen visual acuities were determined using his or her best spectacle correction. A Clason acuity slide and projector was used to provide a more precise determination of visual acuity (Figure 5).

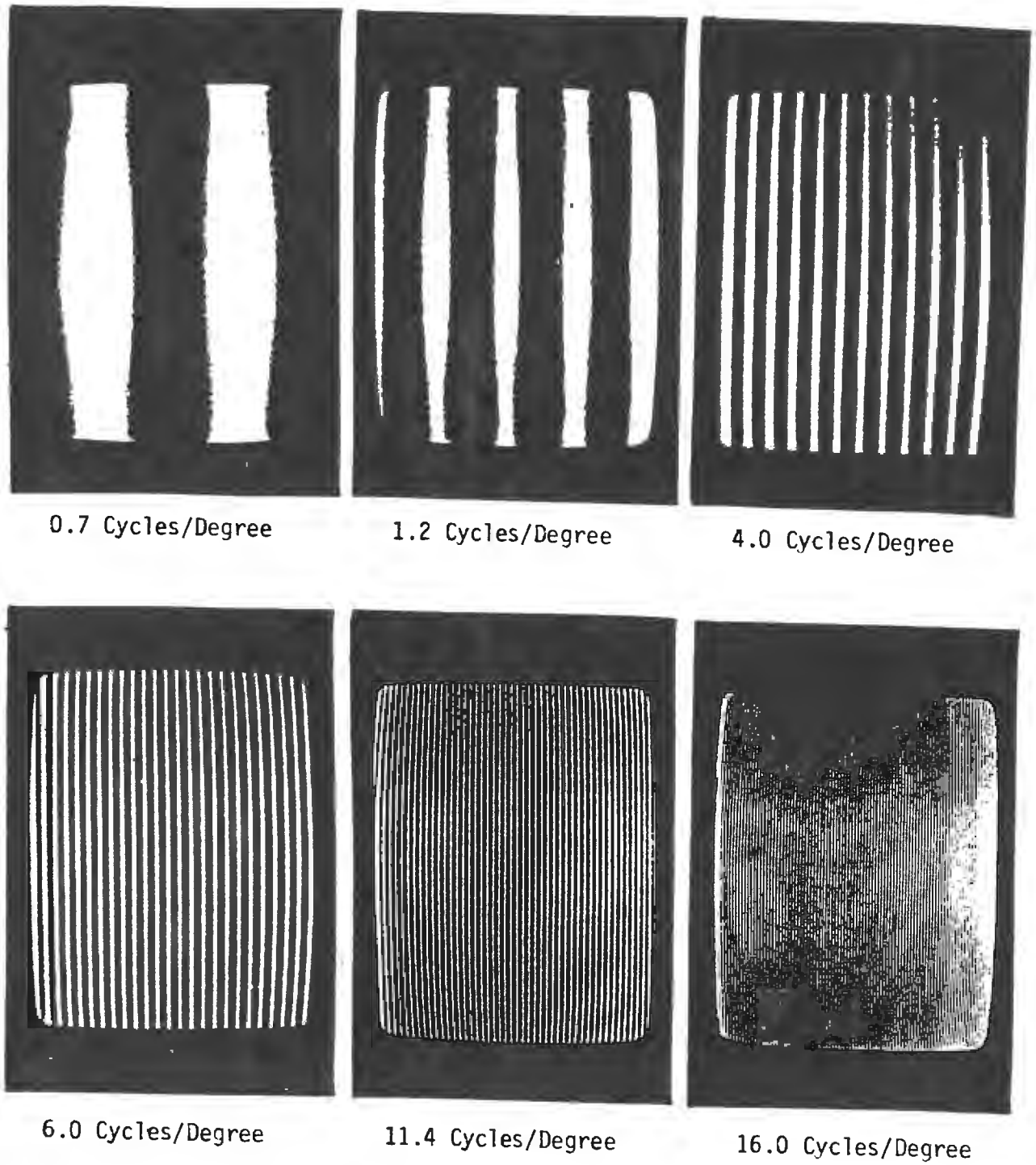

Figure 4. Spatial Frequencies Used to Determine Contrast Sensitivity Function (CSF)

Figure 5. Clason Projector

Contrast sensitivity was measured monocularly with spectacle correction to establish baseline data and a trial frame and lenses were used whenever the subject's spectacles did not match their best spectacle correction.

Each subject, with one exception, was then fit with a Hydrocurve II-55(Barnes-Hind/Hydrocurve) extended wear soft lens on one eye and either a CSI-T(Syntex) or Permaflex(Coopervision) extended wear soft lens on the other eye (Table 2). This selection provided a medium water content lens and a high or low water content lens for each subject to minimize subject awareness of a difference between the lenses. The exception required the use of CSI-T and Permaflex lenses on one subject to achieve a proper fit. Subjects were not

informed that they were wearing two different lens types ("single-blind" paradigm).

CONTACT LENS TABLE

LENS	MANUFACTURER	POLYMER	WATER CONTENT
CSI-T	Syntex	crofilcon A	38.5%
Hydrocurve II55	Barnes Hind	bufilcon A	55.0%
Permaflex	Coopervision	surfilcon A	74.0%

Table II: Contact Lens Data

Contrast sensitivity was again determined for each subject following a 30 minute adaptation period. All residual refractive errors were corrected using a trial frame and lenses. The complete schedule of testing for the contact lens dispensing day, given in Appendix C, indicates the order of all data collection for the three concurrent studies using this subject group. During dispensing, subjects were instructed in the proper methods of insertion, removal, and care of their lenses. A printed instruction form, *Caring for Your Extended Wear Contact Lenses*, was given to each subject.

Eight additional testing sessions, over a five month period, followed the initial testing. They were scheduled at weekly intervals during the first month and at monthly intervals thereafter. Subjects were instructed to wear their lenses for seven days on an extended wear basis and to awaken a minimum of three hours prior to testing. All subjects removed their lenses every seventh night for overnight cleaning, disinfection, and storage. The instructions and

contact lens care regimen given to each subject is outlined in Appendix D.

The comprehensive followup examinations included:

1. visual acuity and subjective refraction at 20 feet
2. contrast sensitivity testing
3. auto refraction and auto keratometry
4. slit lamp biomicroscopy
5. manual ophthalmometry
6. endothelial cell count and photodocumentation
7. corneal thickness determination
8. photokeratoscopy (Corneascope)
9. intraocular pressure (AO Non-Contact Tonometer)
10. binocular stereopsis (Keystone Aviator Series)

These tests and the order of their administration are given on the Contact Lens Followup Form (Appendix C).

At the end of study each subject was refitted with a new pair of soft contact lenses based upon eye health, lens performance, and subject preference. Eye health and contact lens status was discussed with each subject and a copy of their contact lens specifications was reviewed and dispensed (Appendix C).

The four subjects comprising the control group were on the same schedule established for the test subjects. Their nine contrast sensitivity measurements during the 150 day study were utilized to determine the consistency and reliability of the instruments and procedures used in this investigation.

TREATMENT OF DATA

The purpose of this study was to determine whether soft contact lens extended wear resulted in a significant decrease in contrast sensitivity, with time, when compared to prefit contrast sensitivities with spectacles. The statistical analysis had to consider the following conditions: (1) three different contact lens types (2) six spatial frequencies (3) and two testing situations (contact lenses and spectacles). Nine separate testing periods also had to be considered. A two-way analysis of variance for repeated measures was used to analyze the data.[29,30] Brennan[31] and Coffey[32] agreed that this was the appropriate method for data treatment. Eighteen separate analyses were run to study the three different lens types at the six spatial frequencies tested (Appendix E). The *Northwest Analytical Statistical Package* (NWA StatPak)[33] and an Apple MacIntosh computer were used for these analyses.

A .05 level of significance was used to determine whether the hypothesis for the study was considered statistically significant. This significance level states that there is only a five percent probability of obtaining the observed decrease in contrast sensitivity by random factors alone.[29] If the results did not show a decrease at the .05 level, then they were considered not significant and the hypothesis were rejected.

In the statistical analyses, contrast sensitivity data with contact lenses were compared to that with spectacle lenses to reveal one of the three possibilities stated in the second part of the hypothesis.

(1) A significant decrease in contrast sensitivity occurring when contact lenses were worn as compared to that measured when spectacles were worn, would suggest that the decrease was due to the contact lens. This is represented in the Lens column of the significance study (Tables IV, V, and VI). A probability less than .05 indicates a significant difference occurred between contact lens correction and spectacle lens correction. Referral to the mean tables or CSF graphs establishes which contrast sensitivity values were lower: contact lens or spectacle.

(2) A significant decrease in contrast sensitivity found through the course of the study when both contact lenses and spectacles were worn, would suggest the cornea was responsible for the decrease. This is represented by the Time column in the significance study. This column compares the nine contrast sensitivity measurements taken while corrected with contact lenses, using the prefit spectacle contrast sensitivity measurements as the baseline.

(3) A significant difference in contrast sensitivity found between the two testing situations (contact lens and spectacles) and a significant decrease in contrast sensitivity for both during the course of the study, would suggest that the decrease was attributed to both the cornea and the contact lens. This determination can be found in the Interaction column of the significance study.

The two-way analysis of variance produced an F-ratio which indicated the probability of random occurrence of the results. The calculated F-ratio, at the appropriate degrees of freedom (df) for the grouped being tested, was compared to values in

the F-table. The results were considered significant if there was less than a five percent probability ($P<.05$) of obtaining a calculated F by random factors alone.[30]

RESULTS

The 9 testing intervals over the 150 day study resulted in 18 separate contrast sensitivity tests for each subject: nine with spectacle correction and nine with contact lens correction. These measurements were in addition to the baseline measurement administered prior to contact lens fitting.

Statistical analyses of the data for subjects wearing the three contact lens types are represented in Tables IV,V, and VI. These analyses were run for each of the six spatial frequencies and resulted in the three F-ratios mentioned in the Treatment of Data section. Two graphical representations using the mean contrast sensitivity values in Tables VII through XII help illustrate any changes found in the data. Figures 6, 7, and 8 are contrast sensitivity functions in which mean contrast sensitivity was plotted as a function of spatial frequency. The baseline (prefit) CSF for subjects fitted with each of the three types of lenses is compared to the CSF during contact lens wear at day 0 and day 150. The CSF at day 150 during spectacle correction is also represented.

To demonstrate changes in contrast sensitivity as a function of time it was necessary to plot the six spatial frequencies separately. A graphical representation of each spatial frequency (0.7, 1.2, 4.0, 6.0, 11.4, 16.0 cycles/degree) over time can be seen in Figures 9 through 14. They compare the mean contrast sensitivites of subjects wearing CSI-T, Hydrocurve II, and Permaflex lenses for the nine testing intervals. The mean contrast sensitivities for

the control group are also represented for comparison.

The results of the statistical analysis for the subjects wearing CSI-T lenses (Table IV) were as follows:

1. Significant decreases in contrast sensitivity, through time, were found at 1.2, 4.0, 6.0, and 11.4 cycles/degree.

2. A significant decrease in contrast sensitivity, while wearing CSI-T lenses (compared to spectacle lenses), occurred at 4.0 cycles/degree. At this spatial frequency, therefore, a decrease in contrast sensitivity can be attributed to the contact lens. For the remaining spatial frequencies that showed a decrease in contrast sensitivity with time (1.2, 6.0, and 11.4 cycles/degree) the cause is attributed to the cornea.

3. Of the 4 spatial frequencies that showed a decrease in contrast sensitivity through time, only 1.2 cycles/degree showed a significant combined effect of the contact lens and the cornea.

The results of the statistical analysis for the subjects wearing Hydrocurve II lenses (Table V) were as follows:

1. A significant decrease in contrast sensitivity occurred at all frequencies tested, through time, during contact lens wear.

(2) There was no significant difference in contrast sensitivity between contact lens wear and spectacle lens wear (after contact lens removal). The significant decreases in contrast sensitivity found above are, therefore, attributable to the cornea.

(3) There was a combined effect of the contact lens and the cornea at 1.2 and 4.0 cycles/degree.

The results of the statistical analysis for the subjects

wearing Permaflex lenses (Table VI) were as follows:

(1) A significant decrease in contrast sensitivity occurred at all frequencies tested accept 0.7 cycles/degree, through time, during contact lens wear.

(2) There was no significant difference in contrast sensitivity between contact lens wear and spectacle lens wear. The significant decreases in contrast sensitivity found at all 6 spatial frequencies were, therefore, attributable to the cornea.

(3) There was no combined effect of the contact lens and the cornea at any of the spatial frequencies tested.

The statistical analysis was performed on the data collected from 21 of the original 39 subjects. Lenses that had to be replaced because of loss or damage and data collected from subjects who did not complete the study were not included. Of the 26 subjects able to complete the full 150 days, 15 required a single lens replacement and 4 required replacement of both lenses. Only 33 of the original 78 lenses were worn throughout the study without replacement and, therefore, comprised the final analysis. Of these lenses, 18 were Hydrocurve II, 8 were CSI-T, and 7 were Permaflex.

33% of the initial subject population did not complete the 150 day study. There were 2 subjects who failed to return for their scheduled appointments. One of these subjects did not return after his initial examination and contact lens fitting and the other dropped out after 60 days because of family problems. Another subject joined the U.S. Army and had to leave the area and one subject was discontinued because of excessive lens use, losing or damaging six lenses during the

first four months of the study.

Two subjects had to be discontinued because of pregnancy, a criteria established at the beginning of the study. Discomfort was experienced by 2 additional subjects during the first 14 days of extended wear. Folds in Descemet's membrane were revealed during the biomicroscopic examination. Both of these subjects also experienced conjunctival injection and excessive tearing. They were successfully fit with daily wear soft lenses and released from the study.

Lastly, 6 subjects developed a viral-like syndrome during the first three months of contact lens extended wear and were unable to complete the study. All 6 subjects experienced a watery discharge and discomfort with contact lens wear associated with follicular conjunctivitis and subepithelial corneal infiltrates. Four of the subjects presented with palpable preauricular lymph nodes on the affected side. The condition was bilateral in 2 of the subjects but affected the second eye only after contact lens wear had been discontinued. The eventual diagnosis was epidemic keratoconjunctivitis and in all cases the problem resolved following one month of contact lens removal. Of the 6 subjects that developed this problem, 5 were wearing the high water content lens(Permaflex) and 1 was wearing the low water content lens(CSI-T). Table III is a summary of the subjects who did not complete the study.

Subject compliance to the complete contact lens care regimen (Appendix D) was excellent. A questionnaire answered by all subjects at the end of the study indicated no difficulties were experienced by any of the subjects in

following the instructions for the wearing and caring of their lenses.

Biomicroscopic examination revealed no neovascularization in any of the subjects through the course of the investigation. These examinations did, however, show increased limbal vascular engorgement in many cases, unaccompanied by subjective symptoms.

SUBJECTS WHO DID NOT COMPLETE STUDY

REASON	SUBJECTS	(% of Total Subjects)
1. Left the area	1	2.5%
2. Excess lens replacement	1	2.5%
3. No Show	2	5%
4. Pregnancy	2	5%
5. Discomfort	2	5%
6. Viral-like syndrome	6*	15%*
	13**	33%**

*one of the pregnant subjects is included in this count
**adjusted for subject duplication

Table III: Subject Data

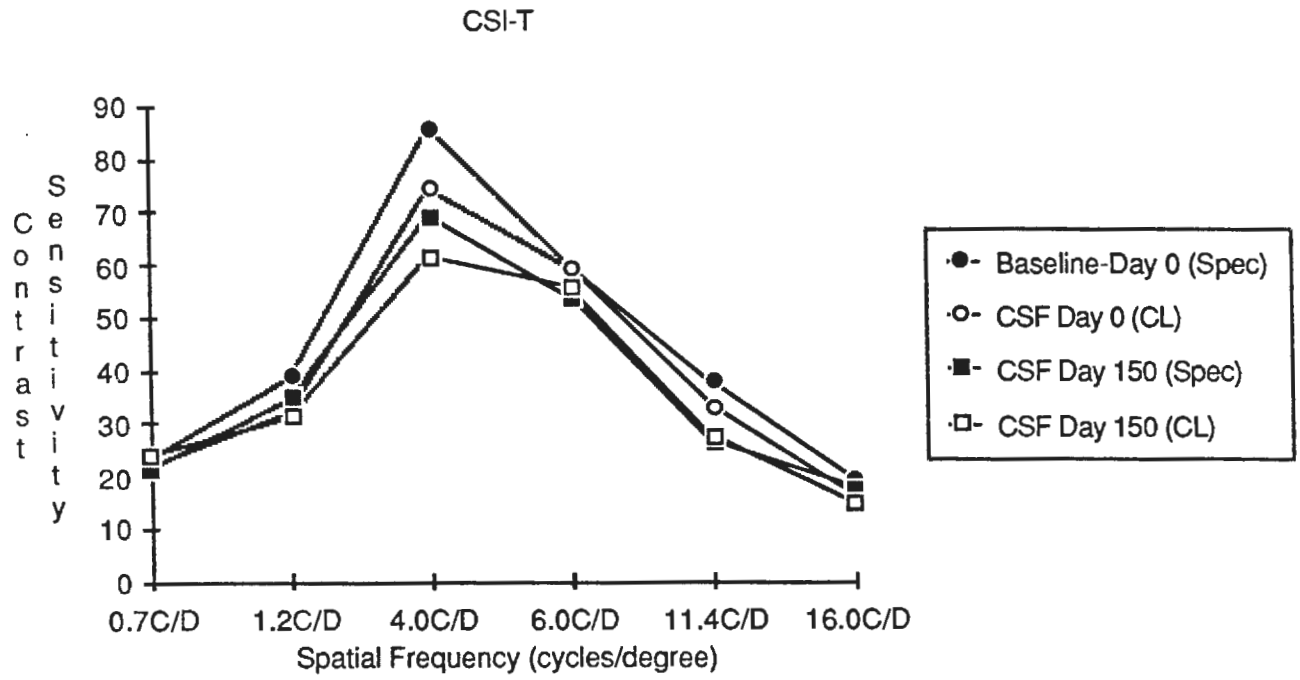

Figure 6. Graph of contrast sensitivity function(CSF) for subjects wearing CSI-T lenses. Mean contrast sensitivity is plotted as a function of spatial frequency.

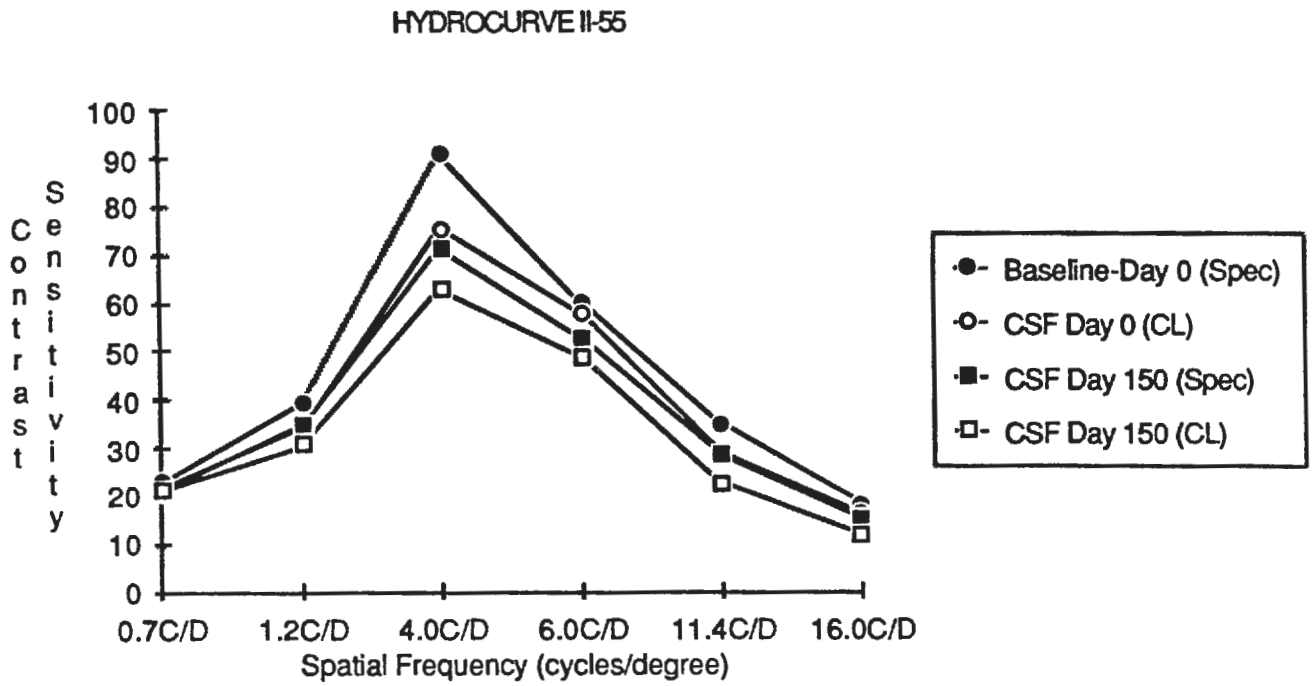

Figure 7. Graph of contrast sensitivity function(CSF) for subjects wearing Hydrocurve II-55 lenses. Mean contrast sensitivity is plotted as a function of spatial frequency.

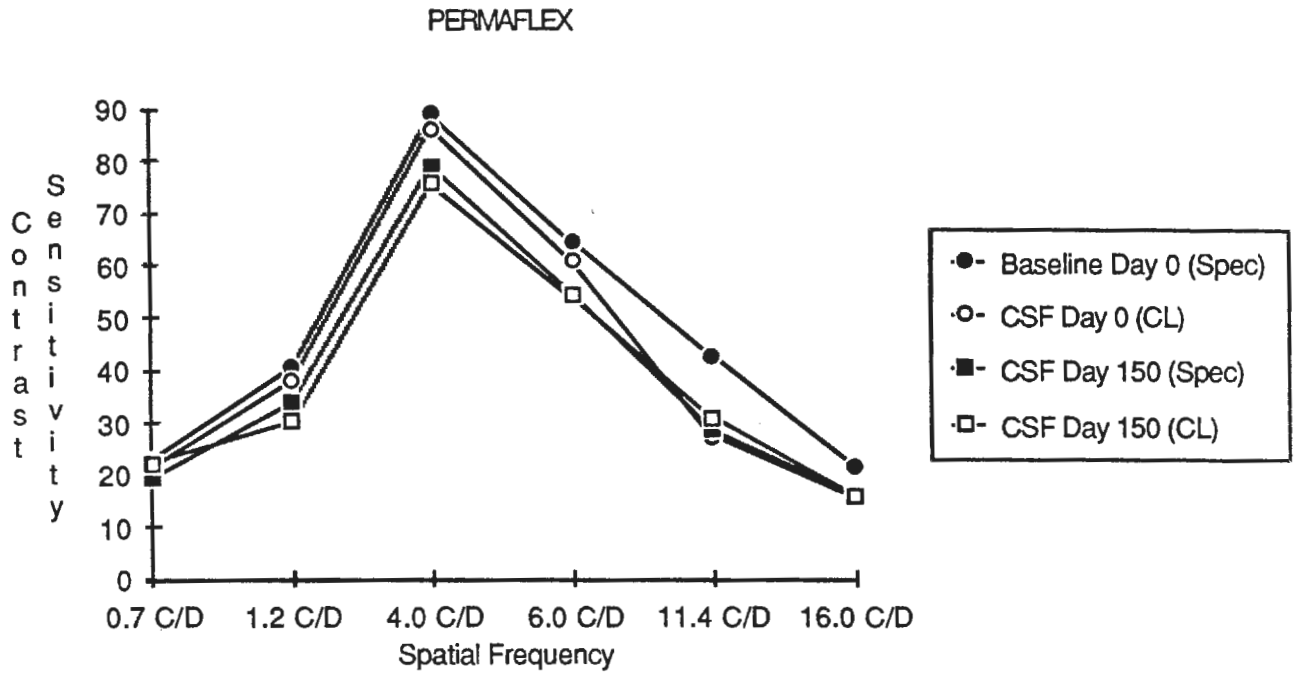

Figure 8. Graph of contrast sensitivity function(CSF) for subjects wearing Permaflex lenses. Mean contrast sensitivity is plotted as a function of spatial frequency.

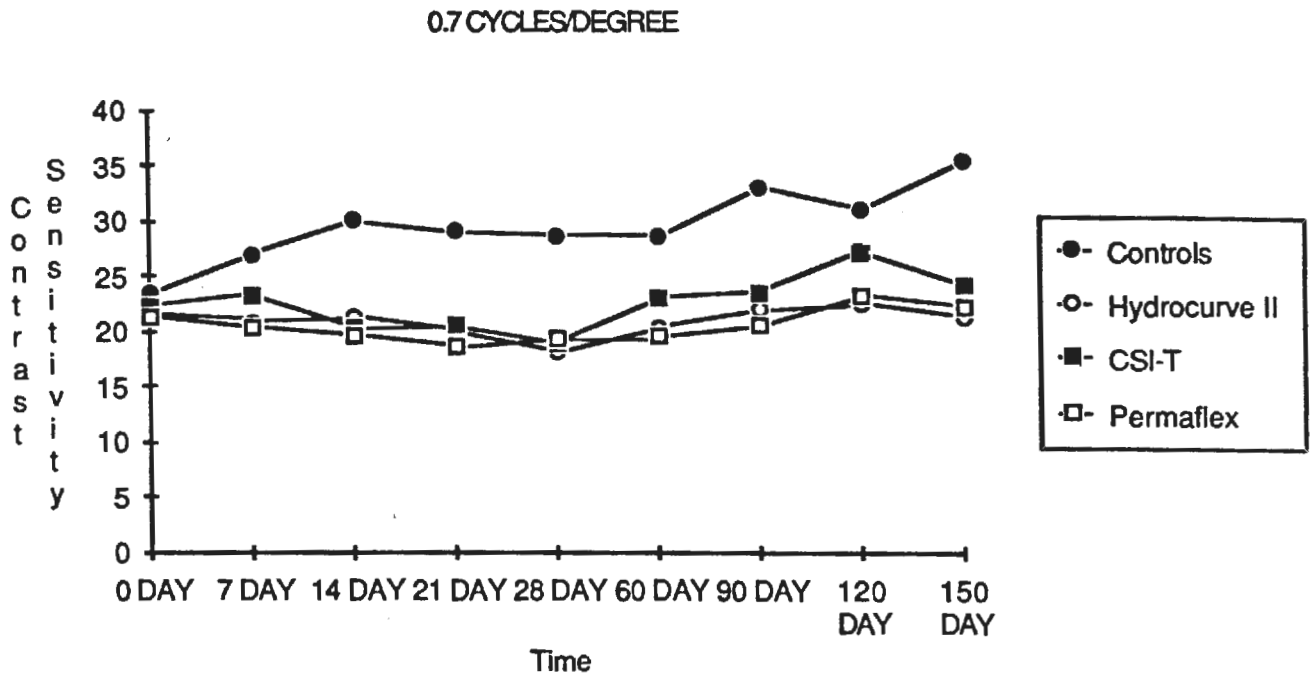

Figure 9. Graph of contrast sensitivity plotted as a function of time for 0.7 cycles/degree.

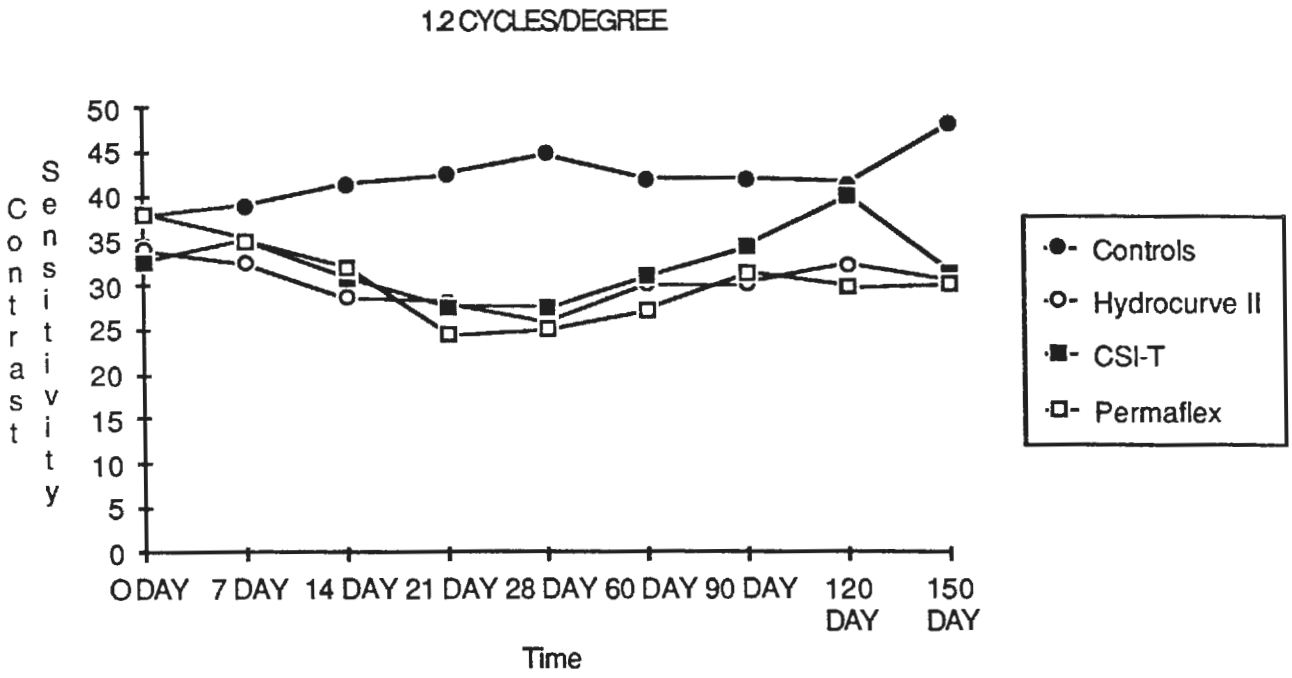

Figure 10. Graph of contrast sensitivity plotted as a function of time for 1.2 cycles/degree.

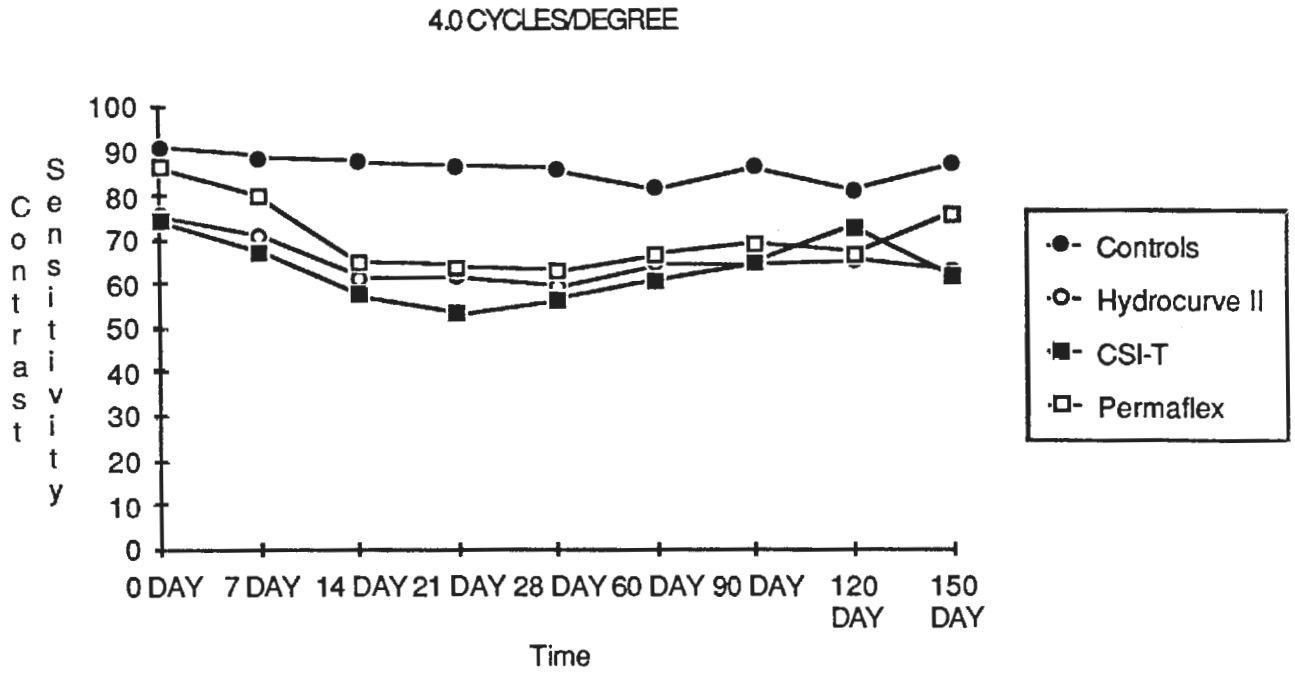

Figure 11. Graph of contrast sensitivity plotted as a function of time for 4.0 cycles/degree.

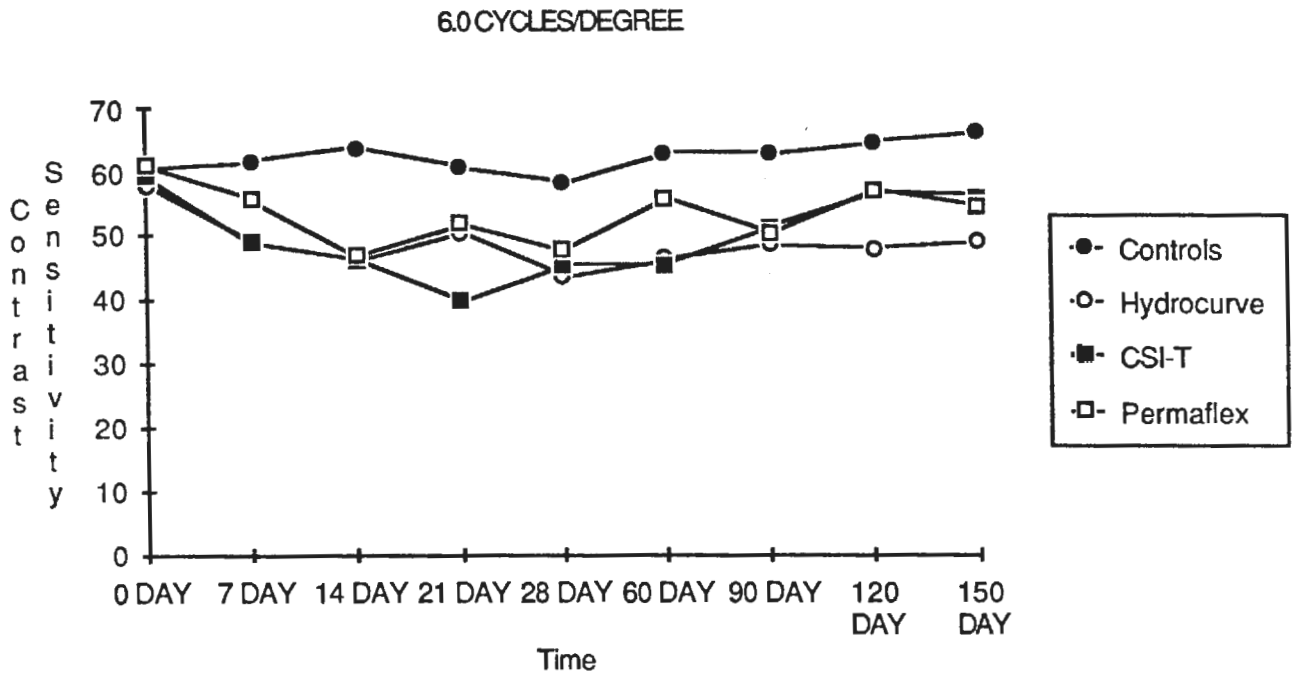

Figure 12. Graph of contrast sensitivity plotted as a function of time for 6.0 cycles/degree.

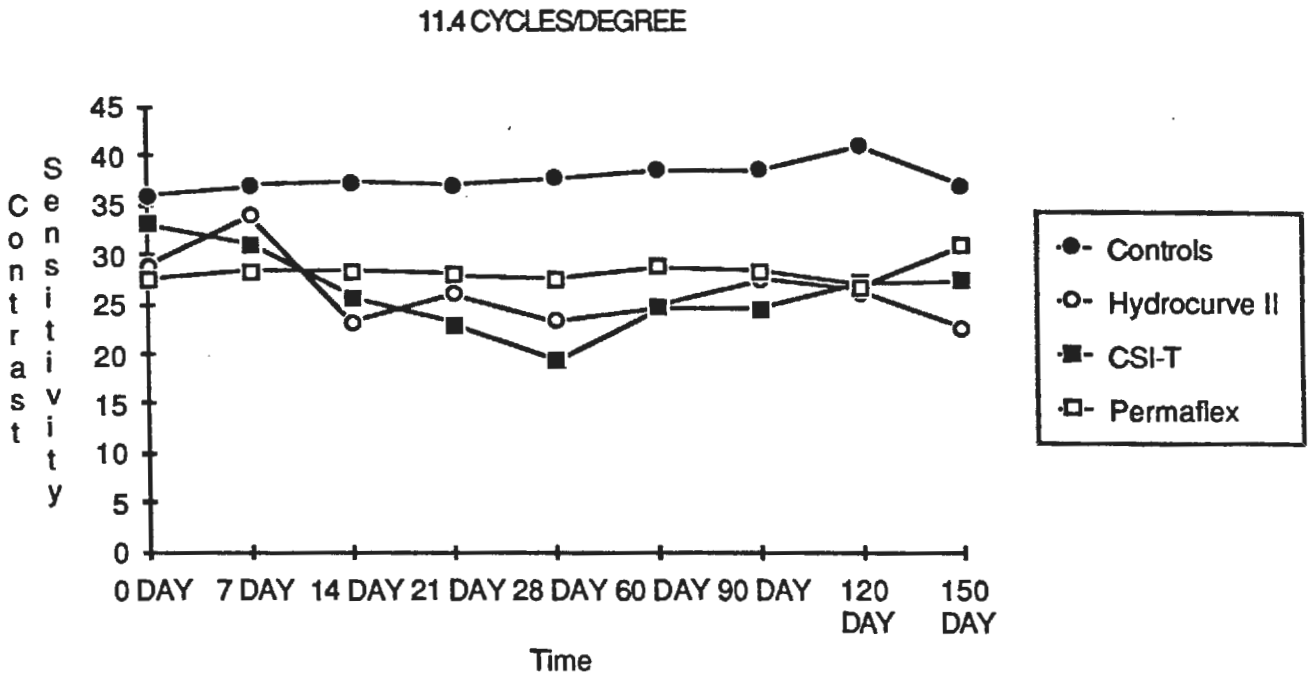

Figure 13. Graph of contrast sensitivity plotted as a function of time for 11.4 cycles/degree.

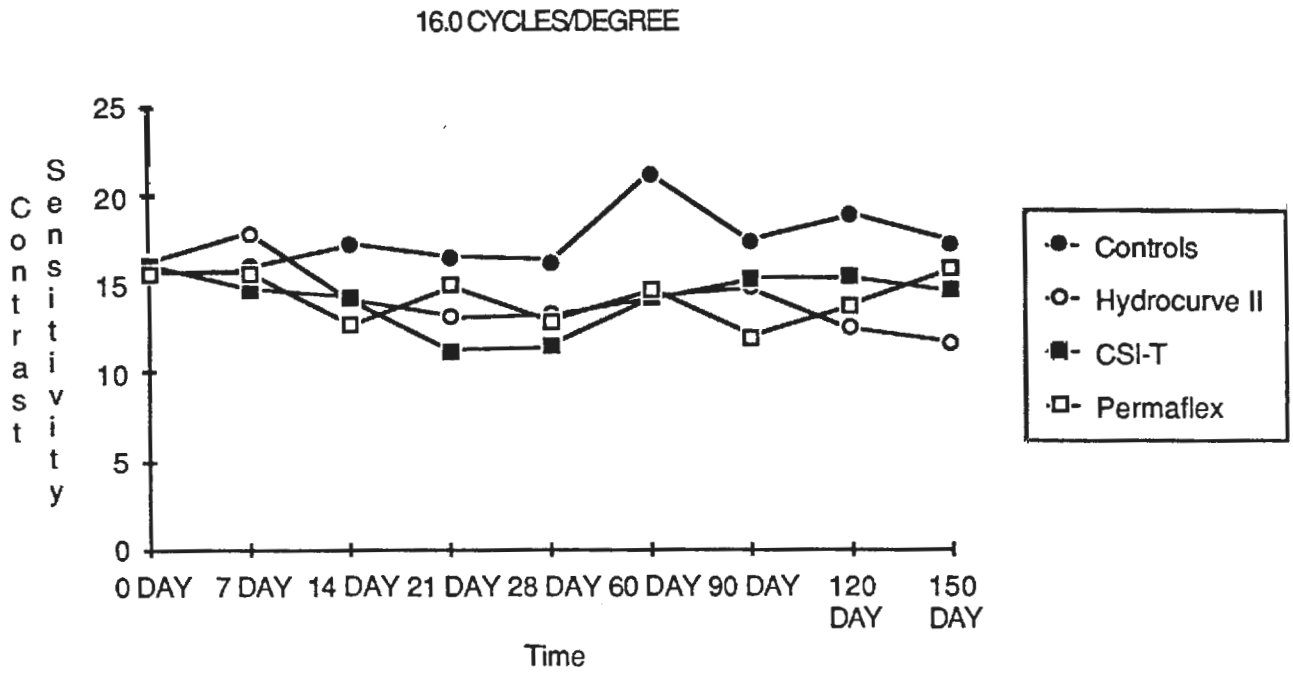

Figure 14. Graph of contrast sensitivity plotted as a function of time for 16.0 cycles/degree.

Table IV: Significance study: Two Way Analysis of Variance for Repeated Measures (Appendix E). Data taken with CSI-T extended wear soft lenses (residual refractive error corrected). N = 8 eyes.

SPATIAL FREQUENCY (Cycles/Degree)	LENS (Spec vs CL)	TIME	INTERACTION (Lens vs Time)
0.7 C/D	F (1,7) = 0.005 p>.05	F (9,63) = 0.963 p>.05	F (9,63) =1.131 p>.05
1.2 C/D	F (1,7) = 0.106 p>.05	F (9,63) = 5.191 p<.01	F (9,63) = 2.252 p<.05
4.0 C/D	F (1,7) = 8.851 p<.05	F (9,63) = 2.831 p<.01	F (9,63) = 0.744 p>.05
6.0 C/D	F (1,7) = 1.856 p>.05	F (9,63) = 2.295 p<.05	F (9,63) = 1.133 p>.05
11.4 C/D	F (1,7) = 1.772 p>.05	F (9,63) = 3.517 p<.01	F (9,63) = 0.909 p>.05
16.0 C/D	F (1,7) = 4.087 p>.05	F (9,63) = 1.215 p>.05	F (9,63) = 0.813 p>.05

Table V: Significance study: Two Way Analysis of Variance for Repeated Measures (Appendix E). Data taken with HC II extended wear soft lenses (residual refractive error corrected). N = 18 eyes.

SPATIAL FREQUENCY (Cycles/Degree)	LENS (Spec vs CL)	TIME	INTERACTION (Lens vs Time)
0.7 C/D	F (1,17) = 4.403 p>.05	F (9,153) = 2.394 p<.05	F (9,153) = 0.705 p>.05
1.2 C/D	F (1,17) = 2.174 p>.05	F (9,153) = 8.727 p<.01	F (9,153) = 2.217 p<.05
4.0 C/D	F (1,17) = 1.611 p>.05	F (9,153) = 11.993 p<.01	F (9,153) = 2.408 p<.05
6.0 C/D	F (1,17) = 0.005 p>.05	F (9,153) = 7.350 p<.01	F (9,153) = 0.722 p>.05
11.4 C/D	F (1,17) = 0.094 p>.05	F (9,153) = 5.979 p<.01	F (9,153) = 3.251 p<.01
16.0 C/D	F (1,17) = 0.049 p>.05	F (9,153) = 3.904 p<.01	F (9,153) = 2.393 p<.05

Table VI: Significance study: Two Way Analysis of Variance for Repeated Measures (Appendix E). Data taken with Permaflex extended wear soft lenses (residual refractive error corrected). N = 7 eyes.

SPATIAL FREQUENCY (Cycles/Degree)	LENS (Spec vs CL)	TIME	INTERACTION (Lens vs Time)
0.7 C/D	F (1,6) = 2.609 p>.05	F (9,54) = 0.682 p>.05	F (9,54) =0.905 p>.05
1.2 C/D	F (1,6) = 1.992 p>.05	F (9,54) = 4.466 p<.05	F (9,54) = 1.338 p>.05
4.0 C/D	F (1,6) = 0.111 p>.05	F (9,54) = 2.492 p<.05	F (9,54) = 0.466 p>.05
6.0 C/D	F (1,6) = 0.005 p>.05	F (9,54) = 2.197 p<.05	F (9,54) = 0.926 p>.05
11.4 C/D	F (1,6) = 1.607 p>.05	F (9,54) = 2.71 p<.05	F (9,54) = 1.505 p>.05
16.0 C/D	F (1,6) = 3.476 p>.05	F (9,54) = 2.669 p<.05	F (9,54) = 0.969 p>.05

Table VII: Mean contrast sensitivity (±1 standard deviation) with CSI-T extended wear soft lenses (residual refractive error corrected). N = 8 eyes (lenses that completed the 150 day study without replacement).

	CONTRAST SENSITIVITY					
SPATIAL FREQUENCY	SPECTACLES	EXTENDED WEAR SOFT CONTACT LENSES				
(CYCLES/DEGREE)	BASELINE	DISPENSING	DAY 7	DAY 14	DAY 21	DAY 28
0.7 C/D	23.8 ± 4.8	22.3 ± 6.3	23.3 ± 5.9	20.2 ± 7.1	20.5 ± 8.8	18.9 ± 8.6
1.2 C/D	39.3 ± 11.3	32.6 ± 10.9	35.2 ± 15.5	30.9 ± 10.0	27.6 ± 10.6	27.4 ± 11.4
4.0 C/D	85.7 ± 20.8	74.3 ± 15.1	67.3 ± 24.7	57.2 ± 26.4	53.1 ± 12.0	56.5 ± 14.6
6.0 C/D	59.8 ± 18.1	59.4 ± 17.9	48.8 ± 16.3	46.2 ± 16.2	39.7 ± 14.6	45.3 ± 13.0
11.4 C/D	38.0 ± 7.7	33.1 ± 9.4	31.1 ± 15.2	25.7 ± 11.0	23.0 ± 8.1	19.3 ± 7.0
16.0 C/D	19.4 ± 5.8	16.1 ± 4.9	14.7 ± 6.4	14.2 ± 5.1	11.2 ± 5.5	11.5 ± 5.6
(CYCLES/DEGREE)	BASELINE	DAY 60	DAY 90	DAY120	DAY150	
0.7 C/D	23.8 ± 4.8	23.0 ± 9.6	23.5 ± 9.5	27.2 ± 9.9	24.1 ± 10.8	
1.2 C/D	39.3 ± 11.3	31.0 ± 8.2	34.5 ± 10.3	40.1 ± 8.4	31.5 ± 9.1	
4.0 C/D	85.7 ± 20.8	60.7 ± 19.3	64.9 ± 21.5	72.8 ± 14.4	61.6 ± 14.7	
6.0 C/D	59.8 ± 18.1	45.4 ± 9.8	51.1 ± 10.0	56.5 ± 14.0	55.8 ± 15.0	
11.4 C/D	38.0 ± 7.7	24.7 ± 8.6	24.6 ± 8.6	27.1 ± 7.7	27.5 ± 12.9	
16.0 C/D	19.4 ± 5.8	14.2 ± 3.1	15.3 ± 7.7	15.4 ± 4.9	14.6 ± 9.2	

Table VIII: Mean contrast sensitivity (±1 standard deviation) with HC II extended wear soft lenses (residual refractive error corrected). N = 18 eyes (lenses that completed the 150 day study without replacement).

	CONTRAST SENSITIVITY					
SPATIAL FREQUENCY (CYCLES/DEGREE)	SPECTACLES BASELINE	EXTENDED WEAR SOFT CONTACT LENSES DISPENSING	DAY 7	DAY 14	DAY 21	DAY 28
0.7 C/D	22.8 ±6.4	21.6 ± 7.8	20.9 ± 7.4	21.3 ± 9.0	19.9 ± 9.8	18.1 ± 6.5
1.2 C/D	39.3 ± 9.1	34.0 ± 7.7	32.5 ± 10.0	28.6 ± 9.8	28.1 ± 12.5	25.8 ± 8.6
4.0 C/D	90.7 ± 20.8	75.3 ± 19.2	70.9 ± 22.6	61.3 ± 22.6	61.5 ± 23.7	59.2 ± 22.7
6.0 C/D	60.2 ± 19.0	57.9 ± 14.0	48.7 ± 12.4	46.0 ± 14.8	50.3 ± 14.2	43.5 ± 13.8
11.4 C/D	34.8 ± 12.7	28.9 ± 12.0	33.9 ± 19.1	23.2 ± 10.0	26.1 ± 12.7	23.3 ± 7.2
16.0 C/D	18.1 ± 7.2	16.2 ± 6.1	17.9 ± 7.1	14.1 ± 5.5	13.1 ± 5.3	13.3 ± 5.0
(CYCLES/DEGREE)	BASELINE	DAY 60	DAY 90	DAY120	DAY150	
0.7 C/D	22.8 ±6.4	20.4 ± 7.3	21.9 ± 7.9	22.6 ± 10.0	21.3 ± 6.7	
1.2 C/D	39.3 ± 9.1	30.1 ± 8.5	30.3 ± 8.0	32.4 ± 9.7	30.6 ± 7.8	
4.0 C/D	90.7 ± 20.8	64.5 ± 20.4	64.1 ± 18.1	65.3 ± 14.6	62.6 ± 13.1	
6.0 C/D	60.2 ± 19.0	46.4 ± 14.2	48.5 ± 12.2	47.9 ± 10.5	49.1 ± 12.5	
11.4 C/D	34.8 ± 12.7	24.8 ±9.6	27.5 ± 8.6	26.2 ± 7.2	22.5 ± 8.2	
16.0 C/D	18.1 ± 7.2	14.3 ± 6.0	14.8 ± 6.3	12.5 ± 4.6	11.7 ± 4.2	

Table IX: Mean contrast sensitivity (±1 standard deviation) with Permaflex extended wear soft lenses (residual refractive error corrected). N = 7 eyes (lenses that completed the 150 day study without replacement).

	CONTRAST SENSITIVITY					
SPATIAL FREQUENCY (CYCLES/DEGREE)	SPECTACLES BASELINE	EXTENDED WEAR SOFT CONTACT LENSES DISPENSING	DAY 7	DAY 14	DAY 21	DAY 28
0.7 C/D	22.8 ±7.6	21.4 ± 5.6	20.4 ± 8.2	19.6 ± 8.2	18.5 ± 9.4	19.3 ± 6.2
1.2 C/D	40.7 ± 8.4	38.0 ± 8.5	35.1 ± 11.3	32.0 ± 13.0	24.4 ± 6.6	25.0 ± 7.0
4.0 C/D	88.9 ± 17.4	86.2 ± 22.2	79.7 ± 17.3	64.9 ± 24.4	63.7 ± 23.1	62.6 ± 21.3
6.0 C/D	64.8 ± 15.5	60.9 ± 10.3	55.5 ± 7.1	46.7 ± 13.1	51.7 ± 16.8	47.5 ± 12.8
11.4 C/D	42.6 ± 14.1	27.5 ± 10.1	28.4 ± 7.1	28.4 ± 16.4	28.0 ± 11.6	27.6 ± 12.7
16.0 C/D	21.5 ± 8.0	15.6 ± 8.0	15.6 ± 7.5	12.7 ± 5.4	14.9 ± 4.0	12.9 ± 4.1
(CYCLES/DEGREE)	BASELINE	DAY 60	DAY 90	DAY120	DAY150	
0.7 C/D	22.8 ±7.6	19.5 ± 9.6	20.5 ± 6.9	23.2 ± 8.6	22.2 ± 6.2	
1.2 C/D	40.7 ± 8.4	27.3 ± 7.5	31.4 ± 9.8	29.9 ± 7.9	30.2 ± 7.0	
4.0 C/D	88.9 ± 17.4	66.5 ± 23.1	69.0 ± 24.0	66.7 ± 21.4	75.8 ± 18.2	
6.0 C/D	64.8 ± 15.5	55.7 ± 17.9	50.2 ± 10.3	57.1 ± 20.1	54.3 ± 8.6	
11.4 C/D	42.6 ± 14.1	28.8 ± 13.6	28.3 ± 9.3	26.8 ± 9.7	30.9 ± 10.1	
16.0 C/D	21.5 ± 8.0	14.7 ± 6.2	12.0 ± 4.5	13.8 ± 6.1	15.8 ± 4.1	

Table X: Mean contrast sensitivity (±1 standard deviation) with spectacle correction after CSI-T removal. N = 8 eyes (lenses that completed the 150 day study without replacement).

SPATIAL FREQUENCY (CYCLES/DEGREE)	SPECTACLES				
	BASELINE	**DAY 7**	**DAY 14**	**DAY 21**	**DAY 28**
0.7 C/D	23.8 ± 4.8	21.0 ± 5.1	21.8 ± 9.4	20.0 ± 8.7	22.2 ± 4.4
1.2 C/D	39.3 ± 11.3	32.7 ± 7.9	30.0 ± 8.2	29.0 ± 12.0	27.9 ± 7.3
4.0 C/D	85.7 ± 20.8	68.0 ± 23.4	65.7 ± 22.5	70.0 ± 30.1	65.9 ± 21.9
6.0 C/D	59.8 ± 18.1	52.6 ± 17.3	45.8 ± 12.0	54.9 ± 23.1	51.4 ± 17.4
11.4 C/D	38.0 ± 7.7	28.8 ± 11.2	26.7 ± 8.8	27.9 ± 11.3	24.6 ± 8.4
16.0 C/D	19.4 ± 5.8	16.6 ± 7.2	15.4 ± 7.8	17.8 ± 7.1	13.9 ± 8.0
(CYCLES/DEGREE)	**DAY 60**	**DAY 90**	**DAY120**	**DAY150**	
0.7 C/D	22.4 ± 4.9	25.2 ± 8.6	22.7 ± 7.2	21.6 ± 7.6	
1.2 C/D	29.3 ± 7.4	37.0 ± 7.7	33.0 ± 8.0	35.2 ± 7.2	
4.0 C/D	67.1 ± 20.6	74.6 ± 19.7	73.9 ± 18.6	69.2 ± 14.4	
6.0 C/D	53.1 ± 8.0	54.4 ± 13.6	55.4 ± 13.7	54.0 ± 8.6	
11.4 C/D	29.8 ± 8.3	29.8 ± 12.4	27.5 ± 9.1	26.5 ± 9.7	
16.0 C/D	14.8 ± 2.8	17.2 ± 5.4	16.6 ± 6.0	17.5 ± 7.9	

Table XI: Mean contrast sensitivity (±1 standard deviation) with spectacle correction after HC II removal. N = 18 eyes (lenses that completed the 150 day study without replacement).

SPATIAL FREQUENCY (CYCLES/DEGREE)	SPECTACLES				
	BASELINE	DAY 7	DAY 14	DAY 21	DAY 28
0.7 C/D	22.8 ± 6.4	20.8 ± 7.1	18.7 ± 8.0	19.2 ± 10.1	17.0 ± 5.7
1.2 C/D	39.3 ± 9.1	30.9 ± 9.5	29.2 ± 10.9	26.9 ± 10.4	26.8 ± 10.5
4.0 C/D	90.7 ± 20.8	68.9 ± 23.7	62.7 ± 20.7	58.1 ± 18.2	58.2 ± 14.0
6.0 C/D	60.2 ± 19.0	46.9 ± 11.3	46.5 ± 10.0	45.4 ± 15.3	42.5 ± 13.7
11.4 C/D	34.8 ± 12.7	26.2 ± 11.1	26.1 ± 8.1	22.5 ± 6.8	21.9 ± 7.2
16.0 C/D	18.1 ± 7.2	13.6 ± 5.2	15.1 ± 5.2	12.7 ± 5.2	12.2 ± 4.2
(CYCLES/DEGREE)	DAY 60	DAY 90	DAY120	DAY150	
0.7 C/D	18.5 ± 7.0	21.6 ± 9.4	21.1 ± 8.2	20.9 ± 7.0	
1.2 C/D	28.3 ± 9.4	31.6 ± 11.4	31.7 ± 8.6	34.6 ± 9.5	
4.0 C/D	58.7 ± 19.0	70.2 ± 26.0	69.3 ± 20.5	71.2 ± 22.1	
6.0 C/D	43.8 ± 13.3	48.8 ± 18.1	51.4 ± 20.0	52.8 ± 20.6	
11.4 C/D	26.5 ± 11.2	27.5 ± 10.6	27.2 ± 12.0	28.5 ± 13.1	
16.0 C/D	13.5 ± 6.2	15.6 ± 8.6	13.5 ± 5.5	15.1 ± 5.5	

Table XII: Mean contrast sensitivity (±1 standard deviation) with spectacle correction after Permaflex removal. N = 7 eyes (lenses that completed the 150 day study without replacement).

SPATIAL FREQUENCY (CYCLES/DEGREE)	SPECTACLES				
	BASELINE	DAY 7	DAY 14	DAY 21	DAY 28
0.7 C/D	22.8 ± 7.6	21.3 ± 10.7	18.6 ± 7.0	19.0 ± 10.1	20.3 ± 9.3
1.2 C/D	40.7 ± 8.4	35.3 ± 13.2	30.0 ± 12.5	27.1 ±9.0	29.0 ± 10.4
4.0 C/D	88.9 ± 17.4	71.3 ± 25.3	73.2 ± 31.9	62.0 ± 21.5	68.5 ± 29.9
6.0 C/D	64.8 ± 15.5	53.3 ± 16.7	58.5 ± 23.1	51.2 ± 20.6	45.0 ± 11.7
11.4 C/D	42.6 ± 14.1	32.3 ± 13.5	31.5 ± 13.9	31.0 ± 6.2	31.6 ±10.4
16.0 C/D	21.5 ± 8.0	16.2 ± 5.3	17.1± 6.5	16.9 ± 4.5	15.1 ± 6.0
(CYCLES/DEGREE)	**DAY 60**	**DAY 90**	**DAY120**	**DAY150**	
0.7 C/D	18.3 ± 6.5	20.5 ± 7.8	18.5 ± 4.1	19.5 ± 5.6	
1.2 C/D	34.3 ± 12.8	28.6 ± 10.2	31.7 ± 10.6	34.0 ± 13.4	
4.0 C/D	76.1 ± 28.5	65.9 ± 32.1	66.8 ± 14.7	79.0 ± 38.9	
6.0 C/D	56.9 ±24.6	49.3 ± 21.0	49.1 ± 11.2	54.6 ± 20.5	
11.4 C/D	34.8 ± 13.0	27.6 ± 11.0	28.6 ± 8.6	28.8 ± 9.2	
16.0 C/D	19.2 ± 7.3	14.9± 9.3	14.8 ± 4.3	16.3 ± 5.7	

CONCLUSIONS AND DISCUSSION

This study utilized contrast sensitivity measurements to investigate the effects of extended wear soft contact lenses on visual performance. Would a group of such contact lens patients show a significant decrease in contrast sensitivity with time? If so, was such a decrease due to the cornea, the contact lens, or a combined effect of the cornea and contact lens?

The answers to these questions are based on the results of the statistical analyses of the data. Contrast sensitivity was significantly decreased during soft contact lens extended wear at 1.2, 4.0, 6.0, and 11.4 cycles/degree. All three lens types used in this study showed lowered contrast sensitivities at these spatial frequencies. In addition, two lens types(Hydrocurve and Permaflex) showed a significant decrease at 16 cycles/degree and one lens type(Hydrocurve) showed a decrease at 0.7 cycles/degree. Although a combined effect of the cornea and the contact lens was present in some cases, the chief cause of this decrease was the cornea.

All three lenses showed very similar changes in contrast sensitivity with time for the six spatial frequencies tested, indicating that contrast sensitivity is not dependent on the lens type. This is graphically demonstrated in Figures 9 through 14. Patient complaints of visual performance, therefore, may be independent of the lens type.

In contrast to some reports, there was no significantly greater decrease in contrast sensitivity at the higher spatial frequencies (16 cycles/degree) than for the middle or low spatial frequencies. This is attributed to the fact that

great care was taken to correct all residual refractive errors during contact lens testing.

Decreases in contrast sensitivity were accompanied by subjective comments that a decrease in visual performance had occurred. Such comments included seeing road signs, watching television, and reading the Snellen chart. This decrease, however, was not apparent in recorded Snellen acuity or stereopsis testing. Contrast sensitivity measurements, therefore, may provide additional information about visual performance in soft contact lens extended wear patients not revealed with traditional measurements.

The consistency and reliability of the instruments and procedures used in this study were verified by the control group contrast sensitivity results. The consistency of their responses during the 150 day study is illustrated in Figures 9 through 14. These subjects did show a small but gradual increase in contrast sensitivity at several spatial frequencies, indicating a possible learning effect with time. These increases, however, were not statistically sigificant.

The length of investigation and the size of the subject population were two unique aspects of this study. Previous studies of Woo and Hess,[10] Applegate and Massorf,[12] Bernstein and Broderick,[22] and Tomlinson and Mann[3] used subject populations ranging from 3 to 12 subjects and testing periods ranging from 18 hours to 2 weeks. The much longer investigational period and larger subject population used in this study were an effort to address past criticism concerning short testing periods and small subject groups.

The use of extended wear soft contact lenses is also unique to this type of research. The rapidly growing interest and use of extended wear lenses prompted their use in this study. Considering the sustained wearing periods of these lenses, the factors that affect soft lens contrast sensitivity may be magnified. One such factor is deposit formation. Mitra and Lamberts[11] reported a decrease in contrast sensitivity following 2 weeks of soft contact lens wear and attributed this decrease to deposit formation. In addition, the three different lens types used have different structural and physical properties which may be subject to change with time. These aspects could explain why decreases in contrast sensitivity occurring during this reseach were not found in past studies.[3,4,13,22]

The subject population used in the investigation should not be considered a typical random sample of the general population. Prior to selection, each potential subject was given a thorough examination to determine their suitability for soft lens extended wear. Over 100 subjects were initially examined of which only 39 were selected for the study.

A total of 26 of the initial 39 subjects were able to complete this 150 day investigation with their extended wear lenses. Only 9 of these 26 subjects, however, were allowed to remain on an extended wear schedule after the study was concluded. This was based on observations of increased limbal vascular engorgement, conjunctival injection, and superficial corneal epithelial punctate staining. These clinical signs were often accompanied by subjective complaints of mild lens

discomfort. Eye health as well as microscopic and macroscopic changes to the cornea and its surrounds are important considerations when determining the success of soft contact lens extended wear. Although sophisticated methods of measuring the effects of these lenses may not show statistically significant change, a practitioner's clinical evaluation should give him or her cause for concern.

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APPENDIX A

CONTRAST SENSITIVITY TESTING PROGRAM

TESTING PROGRAM

Instructions for performing contrast sensitivity test:

TYPE RTN (RETURN) after responding to each command.

1. Turn on computer and monitor (allow for 15 minute warmup).
2. (PROMPTER) <: TYPE N (for Non-Standard Calibration routine).
3. MESSAGE ?: Patient name
   OD or OS; Status (contact lenses or spectacles)
   Date; Examiner's name
4. STANDARD TEST ? Y/N: N
5. TEST OR CALIBRATE ?: C
6. CAL.METHOD ? (SNP): N (NON-STANDARD)
7. SLOPE= -0.792
8. INTERCEPT= 187
9. <RETURN> TO SCAN: Place the hand control/electric eye on platform in front of monitor.
   PRESS RTN
   Adjust monitor controls until calibration is indicated three consecutive times.
10. EXIT: Y
11. TEST OR CALIBRATE ?: T
12. STANDARD SETUP ?: Y
13. STANDARD METHOD ?: N
14. METHOD (BVAI) ?: I (INCREASING)
15. # REPEATS ?: 3
16. PREVIEW (Y/N) ?: Y
17. PREVIEW TIME <5> ?: RTN (DEFAULT)
18. PREVIEW CONTRAST ?: .2
19. FULLSCALE TIME ?: RTN

20. PRINT ALL DATA ?: RTN

21. STANDARD STIMULI ?: N

22. # STIMULI ?: 6

23. S. TYPE ? <SMCFI>: S (STATIONARY)

24. GRATING/BAR/USER ?: G

25. SPECIFY CONTRAST ?: Y

	SPAT. FREQ.	CONTRAST
1-	6.0	.002
2-	1.2	.002
3-	4.0	.002
4-	11.4	.002
5-	0.7	.002
6-	16.0	.002

26. <RTN> TO START: Instruct patient to indicate when they first identify a grating pattern on the monitor by pressing button on hand control.
2 beeps before PREVIEW pattern
1 beep before TRIAL pattern
PRESS RTN

27. PROBE <N/Y>: Y (YES) if any STD. DEV. (STANDARD DEVIATION) is greater than .100

28. REPEAT TEST <Y/N> ?: Y for other eye

29. MESSAGE: Indicate as above

30. <RTN> TO START: RTN

APPENDIX B

PHOTOMETRIC MEASUREMENT OF MONITOR DISPLAY

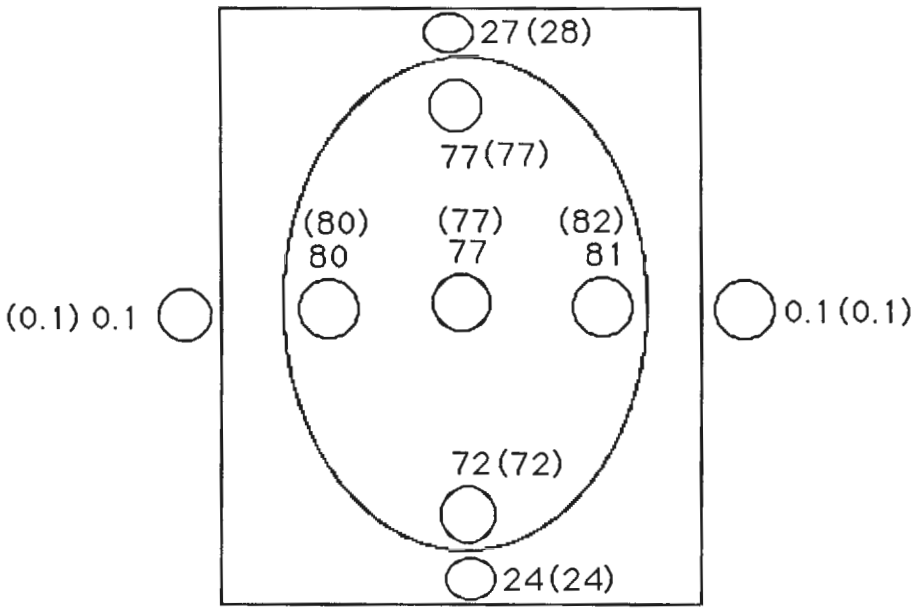
I. Photometric measurement of Nicolet Optronics CS-2000 monitor display.

A. A Tektronix J-16 Photometer with J6523-2 1^0 narrow angle luminance probe was used to verify the established luminance settings at the start and the end of this study. Five measurements of the screen, two measurements of the screen surround, and two measurements of the ambient luminance were taken to make this verification. They are shown below. The luminance measurements in parenthesis were taken at the end of the study.

B. Start of the study: August 19, 1985
The mean luminances of the screen and the screen surround were 77.4 and 25.5 candela/meter^2 respectively. The average ambient luminance was 0.1 candela/meter^2.

The end of the study: March 6, 1986
The mean luminances of the screen and the screen surround were 77.6 and 26 candela/meter^2 respectively. The average ambient luminance was unchanged.

Units of Measurement= nits (candela/meter^2)



APPENDIX C

RESEARCH FORMS

CONTACT LENS FITTING FORM

NAME _____ I.D. NUMBER_____

DATE_____

SUBJECTIVE:

OD

OS

K's OD OS

PUPIL SIZE _____ CORNEAL DIAMETER _____

PALPEBRAL FISSURE _____ TEAR BUT _____

DIAGNOSTIC FITTING

TRIAL 1 LENS - OD_____ TRIAL 2 LENS - OD_____

OS_____ OS_____

	COVERAGE	CENTER	MOVEMENT	OVER K	OVER RET	OVER REF
TRIAL 1 OD	_____	_____	_____	_____	_____	_____
OS	_____	_____	_____	_____	_____	_____
TRIAL 2 OD	_____	_____	_____	_____	_____	_____
OS	_____	_____	_____	_____	_____	_____

SLIT LAMP _____

FINAL CONTACT LENS PRESCRIPTION

	BASE CURVE	DIAMETER	POWER	MANUFACTURE
0D	_____	_____	_____	_____
OS	_____	_____	_____	_____

SAM FORM 1, REVISED 3 JUN 85

CONTACT LENS FOLLOWUP FORM

PATIENT NAME_____ I.D. NUMBER_____

DATE_____ VISIT__**0 - DISP.**__DAYS

DISCUSSION_____

___ CLASON VA - Spec. - OD 20/_____ OS 20/_____ OU 20/_____

C.L. - OD 20/_____ OS 20/_____ OU 20/_____

OVER REFRACTION - OD _____ OS _____

___ CSF - SEE ATTACHED

___ AUTO REFRACTION (WITH LENS) - SEE ATTACHED NUMBER _____

___ AUTO "K" (WITH LENS) - SEE ATTACHED NUMBER_____

___ SLIT LAMP - Injection___ Neo-Vascularization___ Iritis___ Edema___ Staining___

_____

___ OD - DK/L _____ L _____ DK _____ HUM _____ TEMP _____

BOTTLE

OS - DK/L _____ L _____ DK _____ HUM _____ TEMP _____

OD - DK/L _____ L _____ DK _____ HUM _____ TEMP _____

EYE

OS - DK/L _____ L _____ DK _____ HUM _____ TEMP _____

___ ENDO PHOTO - _____PER SQ MM - FIXATION OD_____° OS_____°

___ PACHOMETRY

___ AUTO REFRACTION (WITHOUT LENS) - SEE ATTACHED NUMBER _____

___ AUTO "K" (WITHOUT LENS) - SEE ATTACHED NUMBER _____

___ CORNEASCOPE - PHOTO ATTACHED

___ B&L "K" - OD _____@_____ , _____@_____

OS _____@_____ , _____@_____

___ IOP - NCT - OD _____ OS _____

NOTES - CONSENT FORM SIGNED _____

ANTERIOR SEG PHOTO OU _____

DEPTH PERCEPTION TEST _____

CL INSTRUCTION _____

NEXT APPOINTMENT_____

SAM FORM 2, REVISED 8 AUG 85

CONTACT LENS FOLLOWUP FORM

PATIENT NAME_____ I.D. NUMBER_____

DATE_____ VISIT_____DAYS

DISCUSSION_____

_____

_____

___ CLASON VA - C.L. - OD 20/_____OS 20/_____OU 20/_____

Spec. - OD 20/_____OS 20/_____OU 20/_____

OVER REFRACTION - OD_____ OS_____

___ CSF - SEE ATTACHED

___ AUTO REFRACTION (WITH LENS) - SEE ATTACHED NUMBER_____

___ AUTO "K" (WITH LENS) - SEE ATTACHED NUMBER_____

___ SLIT LAMP - Injection___ Neo-Vascularization___ Iritis___ Edema___ Staining___

_____

___ OD - DK/L _____ L _____ DK _____ HUM _____ TEMP _____

OS - DK/L _____ L _____ DK _____ HUM _____ TEMP _____

___ ENDO PHOTO - _____PER SQ MM - FIXATION OD_____° OS_____°

___ PACHOMETRY

___ AUTO REFRACTION (WITHOUT LENS) - SEE ATTACHED NUMBER_____

___ AUTO "K" (WITHOUT LENS) - SEE ATTACHED NUMBER _____

___ CORNEASCOPE - PHOTO ATTACHED

___ B&L "K" - OD _____@_____ , _____@_____

OS _____@_____ , _____@_____

___ IOP - NCT - OD _____ OS _____

NOTES - _____

_____

_____

_____

NEXT APPOINTMENT_____

SAM FORM 2, REVISED 8 AUG 85

PERFORMANCE DEPTH PERCEPTION TEST

KEYSTONE DIAGNOSTIC SERIES - AVIATORS UNIT

NAME_____ I.D. NUMBER_____

BASELINE (PRE-CONTACT LENS WEAR)

SLIDE #_____

PERCENT STEREOPSIS_____

SECONDS OF ARC_____

EXAMINER_____

DATE_____

FINAL (POST-CONTACT LENS WEAR)

SLIDE #_____

PERCENT STEREOPSIS_____

SECONDS OF ARC_____

EXAMINER_____

DATE_____

COMMENTS_____

SAM FORM 3, REVISED 5 AUG 85

PACIFIC UNIVERSITY
COLLEGE OF OPTOMETRY
2043 COLLEGE WAY
FOREST GROVE, OR 97116

EXTENDED WEAR CONTACT LENS RESEARCH
CONTACT LENS INFORMATION

PATIENT_____

Original "K" O.D._____ Latest "K" O.D._____

Date_____ O.S._____ Date_____ O.S._____

Spectacle Rx O.D._____ Latest Refraction O.D._____

Date_____ O.S._____ Date_____ O.S._____

CURRENT SOFT LENS SPECIFICATIONS

Date Prescribed_____Manufacturer_____

	Base	Power	Diameter	VA
O.D.				20/
O.S.				20/

PRESCRIPTION IS VALID FOR SIX MONTHS FROM DATE PRESCRIBED

SAM FORM 6

EXTENDED WEAR CONTACT LENS PATIENT QUESTIONARIE

1. Do you feel that you received adequate and professional care during the research period? YES____ NO____ COMMENT ___
   _____

2. Are there any changes you would suggest in future research projects of this nature? YES____ NO____ COMMENT_____
   _____

3. Do you plan to remain an extended wear contact lens wearer? YES____ NO____ COMMENT_____
   _____

4. Would you be interested in participating in another research project? YES____ NO____ COMMENT_____
   _____

5. Did you have any problems in following the instructions given during the research period? YES____ NO____ COMMENT____
   _____

6. Did you have a preference between your right and left lenses during the study with . . .
   a. Vision - Right____ Left____ No Difference____
   b. Comfort - Right____ Left____ No Difference____
   c. Ease of Handling - Right____ Left____ No Difference____
   Comments_____

PACIFIC UNIVERSITY
COLLEGE OF OPTOMETRY
2043 COLLEGE WAY
FOREST GROVE, OR 97116

EXTENDED WEAR CONTACT LENS RESEARCH
CONTACT LENS INFORMATION

PATIENT_____

1. Recommend you continue to follow the contact lens care procedures that where prescribed at the beginning of this study.

2. Recommend you have continuing follow-up examinations at 90 day (3 months) to 180 day (6 months) intervals.

3. Recommend you wear your contact lenses in the following manner:

_____

I have read and understand the above. I have received a new pair of contact lenses and the prescription for these lenses.

_____
Signature

_____
Date

APPENDIX D

CONTACT LENS REGIMEN AND INSTRUCTIONS

CARING FOR YOUR EXTENDED WEAR CONTACT LENSES

We want you to follow the steps listed below, always starting with the right lens first:

1. Set up all of the items you will need to clean and disinfect your extended wear lenses (Pliagel, extenzyme cleaner, Septicon disinfection system, and Blairex deionizer).
2. Wash your hands with a pure soap that does not contain additives. Rinse thoroughly.
3. Remove your lenses and clean them with Pliagel (see directions supplied with the package). This removes inorganic material from the lens surface.
4. Rinse your lenses off with non-thimerosal saline (Blairex system for making normal saline) to completely remove cleaner.
5. Place the lenses in the Septicon lens baskets and soak in the extenzyme cleaner for 15-20 minutes using the Lensept cup #1. This removes organic material (protein complex from your tears etc.) from the lens.
6. Replace the extenzyme cleaner with fresh saline and shake for 15 seconds.
7. Replace saline with Lensept solution and soak lenses for 10 minutes.
8. Fill Rinse cup #2 with saline solution. Remove the lens basket from cup #1 and place into cup #2. The lenses must be left in cup #2 for 6 hours to neutralize the Lensept disinfection solution.
9. After the 6 hour neutralizing cycle, remove the Septicon lens baskets from the Rinse cup #2. Replace the solution with fresh saline solution and allow the lenses to soak in it for another 3 minutes before placing the lenses back on the eyes.

FOLLOW-UP CARE FOR EXTENDED WEAR CONTACT LENS PATIENTS

Patients wearing contact lenses for extended periods of time require additional professional follow-up care to more closely monitor how their lenses are fitting. For this reason and for the purposes of this research project, the following schedule of follow-up evaluations will be followed:

*After 24 hours of extended wear,
*After 4 days of extended wear,
*After 1 week of extended wear and then weekly for three weeks,
*After each month of extended wear for the remainder of the 5 months of the study.

Your eyes should always "FEEL GOOD, LOOK GOOD AND SEE GOOD." If your eyes bother you at anytime, or if you have any questions or concerns, we want to be the first to know. You can always reach one of our research staff 24 hours a day, 7 days a week. Office 357-6151 ext. 2453, Dr. Tim Allen 357-3953, Dr. David Marrs 357-4026, Dr. Gary Slater 357-8378.

PACIFIC UNIVERSITY
COLLEGE OF OPTOMETRY CLINICS

Extended Wear Lens Care and Handling

Proper care is necessary for successful wear, normal lens life, and good eye health. You will be provided with products to clean, disinfect and store your extended wear lenses. Use them as instructed.

Your lens cleaner is Pliagel and EXTENZYME Soflens protein cleaner

Your lens disinfectant is Septicon Lensept solution

Your soaking solution is Normal saline (Blairex system and salt tablets)

Your rinsing solution is Normal saline

Eyedrops to use before sleep and upon waking Normal saline or Clerz 2

NOTE: These products have been prescribed specifically for your lenses and eyes. Do not change or substitute brands unless you check with us first. Use of improper solutions may result in lens damage or eye irritation.

SPECIAL INSTRUCTIONS: _____

_____

_____

_____

Please note that although certain brands of lenses may be FDA approved for 7, 14, or even 30 days of wear, the adaptability of your eyes is the key factor in determining wearing time. Trust us to recommend a schedule suited to your individual needs. And remember, like any medical device contact lenses must be monitored on a regular basis. Professional follow-up care is the most important element in successful long term lens wear.

IN THE BEGINNING IT IS NORMAL IF:

1) Your lenses itch or feel funny.
2) One lens is more noticeable than the other.
3) Your vision seems fuzzier than with glasses.
4) One eye sees better than the other.
5) You have trouble handling your lenses.

REMOVE AND DO NOT SLEEP IN YOUR LENSES IF:

1) You develop unusual pain or redness.
2) You develop unusually cloudy or foggy vision.
3) You experience a decrease in vision that does not clear up.
4) You suspect something is wrong.

WEARING SCHEDULE

_____

_____

_____

_____

_____

_____

Next appointment: _____

Date 27 AUG 1985

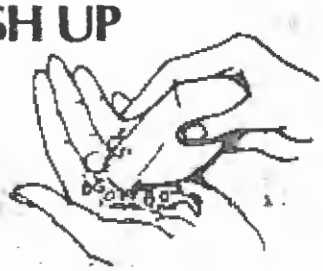
Gary Slater

Dispenser

Patient

Instructions for the Care and Handling of Extended Wear Lenses

1) WASH UP



Before handling your lenses, wash hands, rinse well, and dry with a lint free towel. Fingernails should be short and smooth to avoid damaging the lenses or scratching your eye.

2) RINSE OFF

Remove lens from the case and rinse it well. To avoid possible mix-ups, take the right lens first each time.

3) INSPECTION

Place the lens on your forefinger to inspect it for cleanliness and determine if it's right side out.

4) INVERTED LENS

If the lens is in the correct position, the edges will appear almost straight up. When inverted, the lens edges will flare out slightly. This is often difficult to determine until you have had a little practice.

5) INSERTION

upper lashes (not the lid) to [illegible] b) Pull the bottom [illegible] c) Focus on a steady point with the eye you are not putting the lens on. d) Place the lens on the central cornea, not to the side. e) Do not blink until the lens is in place.

6) EYEDROPS

One or two drops of lens lubricant are recommended if your lenses feel dry or if blurry vision occurs while wearing. Eyedrops may also be helpful prior to removal if your lenses feel dry or sticky.

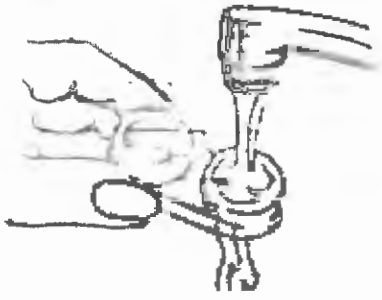
7) REMOVAL

Wash hands before removal. Slide the edge of your lens down onto the white part of your eye (sclera). Then gently squeeze the lens between your thumb and forefinger to remove.

8) CLEANING

Your contacts must be cleaned after wearing. Place the lens in your palm, put a drop or two of cleaning solution on it and rub in a straight back and forth motion.

9) CLEAN CASE



Before storing your lenses overnight, rinse your case well with hot tap water and refill with fresh solution.

APPENDIX E

ANALYSIS OF VARIANCE FOR REPEATED MEASURES DATA

ANALYSIS OF VARIANCE

An analysis of variance is used for testing the hypothesis that two or more independent samples were drawn from populations having the same mean. It makes four assumptions:

(1) the samples are independent random samples
(2) the samples are from normally distributed populations
(3) the populations are equally variable
(4) the samples have the same means

When a hypothesis is rejected using an analysis of variance, it is assumed that it is the inequality of the means that has been violated. The analysis of variance is much more sensitive to violation of the assumption of equal means than to violation of the assumptions of normality or of homogeneous variances.[26]

$$\frac{\text{sum of the squares within groups } SS_w}{\text{degrees of freedom } (N-k)} = \text{mean square within (MSw)}$$

MS_w reflects variation within each sample around its sample mean.

$$\frac{\text{sum of the squares between groups } SS_b}{\text{degrees of freedom } (k-1)} = \text{mean square between (MSb)}$$

MS_b reflects variation of the sample means from the general mean.

$$F = \frac{MS_b}{MS_w} \quad \text{with } df = k-1,\ N-k$$

The F-ratio thus calculated may be compared to the F-table (at the desired level of significance) to determine whether MS_b is significantly larger than MS_w. This procedure, known as the analysis of variance, provides a test of the hypothesis of equal means.

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:CSI(B,CL,S).7SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	2.007813	1	2.007813	5.372394E-02
ERROR	261.6094	7	37.37277	
FACTOR B	369.5781	9	41.06424	.9626528
ERROR	2687.414	63	42.65737	
A x B	197.8594	9	21.98438	1.131137
ERROR	1224.445	63	19.43564	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:CSI(B,CL,S)1.2SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	2.53125	1	2.53125	.1062395
ERROR	166.7813	7	23.82589	
FACTOR B	2132.281	9	236.9201	5.191303
ERROR	2875.188	63	45.6379	
A x B	508.1563	9	56.46181	2.25284
ERROR	1578.938	63	25.0625	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:CSI(B,CL,S)4.0SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	2059.875	1	2059.875	8.851179
ERROR	1629.063	7	232.7232	
FACTOR B	10151.88	9	1127.986	2.83163
ERROR	25096.19	63	398.3522	
A x B	1024.75	9	113.8611	.7438238
ERROR	9643.75	63	153.0754	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:CSI(B,CL,S)6.0SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	439.6563	1	439.6563	1.856278
ERROR	1657.938	7	236.8482	
FACTOR B	3574.094	9	397.1215	2.294855
ERROR	10902.06	63	173.0486	
A x B	986.4375	9	109.6042	1.132883
ERROR	6095.125	63	96.74802	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:CSI(B,CL,S)11.4SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	224.6016	1	224.6016	1.771708
ERROR	887.3984	7	126.7712	
FACTOR B	3326.617	9	369.6241	3.517293
ERROR	6620.523	63	105.0877	
A x B	319.1875	9	35.46528	.9091262
ERROR	2457.648	63	39.01029	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:CSI(B,CL,S)16SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	197.8125	1	197.8125	4.087167
ERROR	338.7891	7	48.39844	
FACTOR B	494	9	54.88889	1.214755
ERROR	2846.664	63	45.18514	
A x B	123.0273	9	13.6697	.8130979
ERROR	1059.148	63	16.81188	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:PF(B,CL,S).7SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	11.28906	1	11.28906	2.608696
ERROR	25.96484	6	4.327474	
FACTOR B	227.0039	9	25.22266	.6822656
ERROR	1996.324	54	36.96897	
A x B	114.2148	9	12.69054	.9045835
ERROR	757.5742	54	14.02915	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:PR(B,CL,S)1.2SP DATE:08-29-1904 ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	106.0469	1	106.0469	1.991978
ERROR	319.4219	6	53.23698	
FACTOR B	2964.359	9	329.3733	4.466271
ERROR	3982.328	54	73.74682	
A x B	278.8594	9	30.98438	1.337639
ERROR	1250.828	54	23.16348	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:PF(B,CL,S)4.0SP DATE:08-29-1904 ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	97.5	1	97.5	.1110254
ERROR	5269.063	6	878.1771	
FACTOR B	10276.44	9	1141.826	2.491962
ERROR	24743	54	458.2037	
A x B	940.875	9	104.5417	.4658902
ERROR	12117.13	54	224.3912	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:PF(B,CL,S)6.0SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	3.03125	1	3.03125	5.078401E-03
ERROR	3581.344	6	596.8906	
FACTOR B	3979.719	9	442.191	2.196951
ERROR	10868.84	54	201.2749	
A x B	807.0625	9	89.67361	.9263216
ERROR	5227.531	54	96.80614	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:PF(B,CL,S)11.4SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	404.7656	1	404.7656	1.607326
ERROR	1510.953	6	251.8255	
FACTOR B	2494.266	9	277.1406	2.710146
ERROR	5522.063	54	102.2604	
A x B	720.1875	9	80.02084	1.505135
ERROR	2870.922	54	53.16522	

--> PROG:NWA StatPak#3:ANOVA2R2 FILE:CS vs TIME:PF(B,CL,S)16SP DATE: ID:X
PAGE 1

	SUM SQUARES	DEG FREEDOM	MEAN SQUARE	F-TEST RATIO
FACTOR A	198.7188	1	198.7188	3.47609
ERROR	343.0039	6	57.16732	
FACTOR B	724.7891	9	80.53212	2.668952
ERROR	1629.379	54	30.17368	
A x B	124.5625	9	13.84028	.9686807
ERROR	771.5391	54	14.28776	

APPENDIX F

SUBJECT DATA FILES

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 101 | F | OD | Age: 26

HCII | C/L Rx: -4.50 | B.C.: 8.80 | Dia: 14.5 | Spec Rx: -4.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	62.1	34.4	83.2	31.9	17.9	12.9	VA C/L	18
DAY 7	36.9	26.3	58.9	12.7	12.7	7.5	VA C/L	20
DAY 14	34.7	27.1	59.3	12.4	16.5	10.3	VA C/L	20
DAY 21	57.5	74.7	61.7	14.2	20.6	13.7	VA C/L	20
DAY 28	30.0	32.4	66.1	17.9	25.7	11.9	VA C/L	18
DAY 60							VA C/L	
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 101 | F | OS | Age: 26

PF | C/L Rx: -4.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -4.50-0.25x010

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	56.7	26.9	70.8	39.5	16.1	29.1	VA C/L	20
DAY 7	53.3	22.0	67.1	29.1	19.1	18.2	VA C/L	18
DAY 14	62.1	28.0	70.8	31.9	18.6	19.2	VA C/L	18
DAY 21	63.6	105.5	96.2	20.9	25.9	14.6	VA C/L	18
DAY 28	44.7	26.5	103.9	15.6	19.3	10.6	VA C/L	18
DAY 60							VA C/L	
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 102 | M | OD | Age: 28

PF | C/L Rx: -1.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	62.1	36.6	100.0	24.5	17.8	25.3	VA C/L	15
DAY 7	61.7	43.0	85.1	24.0	14.9	21.2	VA C/L	15
DAY 14	50.5	27.3	46.4	19.1	14.9	12.7	VA C/L	15
DAY 21	59.3	20.9	50.9	19.5	10.0	12.3	VA C/L	14
DAY 28	47.5	18.6	65.6	22.0	21.9	13.0	VA C/L	14
DAY 60	77.0	30.0	87.1	33.6	16.7	16.0	VA C/L	14
DAY 90	60.3	35.8	80.0	36.6	23.8	16.6	VA C/L	15
DAY 120	94.0	37.2	108.0	33.1	22.9	15.1	VA C/L	17
DAY 150	68.7	42.3	110.5	37.2	26.9	17.2	VA C/L	15

Status: CL | Pt#: 102 | M | OS | Age: 28

HCII | C/L Rx: -1.00 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -1.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	61.7	28.8	78.8	39.5	16.7	24.6	VA C/L	15
DAY 7	47.5	14.9	66.6	30.2	11.7	14.8	VA C/L	15
DAY 14	39.5	19.5	45.4	19.6	10.1	18.2	VA C/L	15
DAY 21	51.3	23.6	95.5	24.5	15.4	11.7	VA C/L	13
DAY 28	49.4	18.5	60.7	30.0	20.0	15.6	VA C/L	14
DAY 60	41.4	30.4	78.2	36.3	22.4	19.3	VA C/L	14
DAY 90	49.4	31.6	83.2	27.5	24.2	27.8	VA C/L	15
DAY 120	37.2	37.4	67.6	19.8	54.5	20.1	VA C/L	15
DAY 150	51.7	39.5	63.1	25.3	33.9	14.7	VA C/L	17

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 103 | F | OD | Age: 18

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00-050x075

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	58.9	46.8	75.3	58.0	54.5	35.0	VA C/L	18
DAY 7	62.6	55.0	68.1	86.4	33.6	22.9	VA C/L	20
DAY 14	53.3	32.4	69.7	31.1	47.1	23.6	VA C/L	18
DAY 21	43.7	34.9	41.4	33.4	30.2	16.5	VA C/L	18
DAY 28	30.9	22.0	35.5	23.1	22.2	19.3	VA C/L	17
DAY 60	38.0	36.6	39.5	29.5	25.3	17.8	VA C/L	20
DAY 90	36.0	36.6	50.9	26.5	20.7	14.0	VA C/L	20
DAY 120	46.8	42.0	62.6	38.6	42.3	23.1	VA C/L	18
DAY 150	52.5	33.9	64.1	21.7	25.5	24.4	VA C/L	20

Status: CL | Pt#: 103 | F | OS | Age: 18

PF | C/L Rx: -2.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -2.25-0.25x105

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	99.2	51.3	95.5	60.3	75.9	38.3	VA C/L	20
DAY 7	61.7	45.7	63.6	42.7	27.1	33.1	VA C/L	17
DAY 14	42.3	27.8	50.9	43.3	31.9	23.8	VA C/L	17
DAY 21	41.4	26.9	47.1	28.8	18.8	13.5	VA C/L	17
DAY 28	42.0	32.4	55.0	31.9	16.6	17.2	VA C/L	17
DAY 60	38.6	29.7	47.5	28.6	23.8	20.0	VA C/L	17
DAY 90	53.3	26.9	52.9	27.3	25.1	18.5	VA C/L	18
DAY 120	77.0	46.1	103.9	43.0	35.8	29.3	VA C/L	17
DAY 150	40.4	33.4	54.1	42.0	27.1	22.2	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 104 | F | OD | Age: 29

HCll | C/L Rx: -1.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.00-0.25x010

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	44.3	31.6	52.9	16.7	20.6	9.8	VA C/L	18
DAY 7	34.1	29.7	53.7	25.7	21.1	16.5	VA C/L	17
DAY 14	38.0	36.6	65.6	28.4	25.5	24.5	VA C/L	18
DAY 21	47.9	39.2	86.4	34.4	38.6	17.2	VA C/L	17
DAY 28	49.7	31.9	70.8	23.1	27.5	13.9	VA C/L	20
DAY 60	46.4	42.7	49.0	22.7	25.3	8.1	VA C/L	17
DAY 90	53.7	29.7	67.1	33.1	28.4	19.1	VA C/L	18
DAY 120	58.0	40.5	77.6	34.1	40.7	14.9	VA C/L	15
DAY 150							VA C/L	

Status: CL | Pt#: 104 | F | OS | Age: 29

PF | C/L Rx: -1.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	55.8	31.1	67.6	25.7	18.9	10.8	VA C/L	18
DAY 7	50.9	31.4	63.1	27.5	36.3	17.4	VA C/L	18
DAY 14	44.3	29.3	76.4	33.1	23.8	13.3	VA C/L	18
DAY 21	51.3	36.6	68.1	34.9	21.5	21.9	VA C/L	17
DAY 28	59.3	26.7	60.3	17.8	24.5	14.0	VA C/L	15
DAY 60	53.7	38.3	71.3	34.9	28.6	15.7	VA C/L	17
DAY 90	45.7	30.9	68.7	29.1	21.5	13.8	VA C/L	17
DAY 120	55.8	32.1	65.1	19.2	21.9	16.7	VA C/L	15
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 105 | F | OD | Age: 27

HCII | C/L Rx: -1.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	66.1	51.7	111.3	32.1	27.8	14.7	VA C/L	17
DAY 7	64.1	49.4	91.9	29.3	26.9	13.6	VA C/L	15
DAY 14	50.9	32.6	69.7	20.6	24.2	11.6	VA C/L	14
DAY 21	53.7	36.0	82.5	33.1	28.8	15.0	VA C/L	14
DAY 28	55.8	35.2	70.3	27.1	23.1	13.9	VA C/L	15
DAY 60	66.1	38.9	78.2	27.5	20.1	15.5	VA C/L	15
DAY 90	73.0	38.0	93.3	23.4	31.1	14.0	VA C/L	14
DAY 120	57.1	46.1	82.5	23.6	26.5	12.5	VA C/L	15
DAY 150	59.8	35.8	69.2	30.2	24.7	16.2	VA C/L	15

Status: CL | Pt#: 105 | F | OS | Age: 27

CSI-T | C/L Rx: -1.25 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	72.4	45.7	78.2	42.7	29.3	18.6	VA C/L	17
DAY 7	69.2	43.0	78.8	34.4	28.2	15.0	VA C/L	15
DAY 14	52.1	45.7	67.6	22.0	13.9	9.2	VA C/L	14
DAY 21	37.4	28.8	62.6	30.0	18.8	10.2	VA C/L	14
DAY 28	55.0	30.0	54.5	19.6	18.5	7.2	VA C/L	14
DAY 60	50.1	31.9	73.6	38.9	23.1	12.1	VA C/L	14
DAY 90	60.7	43.7	89.8	28.2	27.3	16.7	VA C/L	15
DAY 120	72.4	39.5	61.2	22.0	29.5	14.7	VA C/L	15
DAY 150	55.8	31.1	71.3	23.6	24.4	10.6	VA C/L	15

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 106 | F | OD | Age: 31

HCII | C/L Rx: -3.00 | B.C.: 8.5 | Dia: 14.0 | Spec Rx: -2.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	45.0	30.0	73.0	37.2	9.1	18.6	VA C/L	13
DAY 7	47.1	22.6	80.0	25.1	10.9	9.4	VA C/L	14
DAY 14	57.1	28.4	89.1	28.6	14.0	17.9	VA C/L	15
DAY 21	55.0	26.5	66.1	30.0	10.6	12.9	VA C/L	13
DAY 28	54.1	28.2	67.1	35.8	13.8	16.9	VA C/L	14
DAY 60	50.9	25.1	89.8	29.3	10.2	17.4	VA C/L	14
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 106 | F | OS | Age: 31

PF | C/L Rx: -2.75 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -2.75-0.25x008

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	64.6	26.3	69.7	42.3	12.1	17.4	VA C/L	13
DAY 7	48.6	29.1	87.8	38.6	16.9	24.5	VA C/L	14
DAY 14	52.9	24.4	91.9	33.6	17.9	16.7	VA C/L	14
DAY 21	67.1	24.5	79.4	29.3	12.3	13.7	VA C/L	13
DAY 28	54.1	25.1	67.6	35.2	13.8	18.1	VA C/L	14
DAY 60	57.1	20.6	84.5	38.6	11.0	15.4	VA C/L	13
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 107 | F | OD | Age: 22

CSI-T | C/L Rx: -2.00 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	32.4	21.9	56.7	18.9	13.9	11.7	VA C/L	20
DAY 7	26.7	31.4	41.4	13.0	17.8	5.6	VA C/L	18
DAY 14	23.4	19.2	20.1	7.6	12.7	7.6	VA C/L	18
DAY 21	19.8	18.6	37.4	10.6	10.2	4.5	VA C/L	18
DAY 28	26.9	15.1	42.7	11.4	12.9	5.1	VA C/L	18
DAY 60	27.1	23.1	36.9	13.2	11.6	12.9	VA C/L	18
DAY 90	31.9	20.9	36.3	15.8	14.7	8.1	VA C/L	18
DAY 120	36.3	34.1	62.1	15.6	15.0	13.0	VA C/L	20
DAY 150	36.9	17.2	49.0	15.5	13.7	11.0	VA C/L	20

Status: CL | Pt#: 107 | F | OS | Age: 22

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	55.4	37.7	85.1	16.3	13.2	15.3	VA C/L	18
DAY 7	38.6	28.4	50.5	21.5	17.0	11.8	VA C/L	18
DAY 14	29.7	17.1	30.7	9.1	13.5	7.9	VA C/L	18
DAY 21	26.5	16.0	30.9	12.5	7.2	13.7	VA C/L	18
DAY 28	16.3	15.6	22.2	11.5	9.9	7.8	VA C/L	18
DAY 60	25.5	23.6	35.5	14.6	13.8	10.0	VA C/L	18
DAY 90	30.7	22.2	50.1	16.0	13.3	7.4	VA C/L	18
DAY 120	34.4	25.7	58.0	23.3	14.9	12.1	VA C/L	20
DAY 150	26.1	18.3	65.6	22.7	13.1	13.0	VA C/L	20

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status CL | Pt# 108 | F | OD | Age 21

HCII | C/L Rx -5.75 | B.C. 8.8 | Dia 14.5 | Spec Rx -5.75-0.25x065

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	33.9	25.5	52.1	9.3	26.3	6.2	VA C/L	14
DAY 7	46.8	27.3	67.1	23.8	24.7	17.2	VA C/L	18
DAY 14	47.1	32.4	65.1	17.2	31.4	13.8	VA C/L	18
DAY 21	45.7	20.0	52.1	36.6	15.4	10.9	VA C/L	17
DAY 28	38.0	25.3	44.3	29.3	17.5	9.6	VA C/L	17
DAY 60	47.9	30.9	68.1	24.7	29.7	11.3	VA C/L	15
DAY 90	42.7	27.3	54.5	25.7	17.6	11.6	VA C/L	17
DAY 120	45.0	26.7	65.1	34.4	16.1	8.6	VA C/L	18
DAY 150	36.3	26.9	61.2	24.7	21.1	14.2	VA C/L	18

Status CL | Pt# 108 | F | OS | Age 21

PF | C/L Rx -5.25 | B.C. 8.7 | Dia 14.4 | Spec Rx -5.00-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	48.2	29.7	44.0	24.4	24.4	19.5	VA C/L	14
DAY 7	21.1	20.7	39.5	16.6	21.7	9.1	VA C/L	17
DAY 14	57.5	21.5	47.5	22.9	17.4	12.3	VA C/L	17
DAY 21	52.5	19.5	50.9	19.6	19.8	11.1	VA C/L	17
DAY 28	35.2	21.7	61.7	22.6	15.8	13.9	VA C/L	17
DAY 60	43.7	23.6	45.4	25.9	19.1	19.2	VA C/L	15
DAY 90	56.7	40.4	71.3	17.8	15.1	15.7	VA C/L	18
DAY 120	54.1	26.3	81.3	28.2	22.6	13.1	VA C/L	17
DAY 150	56.2	41.1	53.3	41.1	24.5	14.0	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 109 | M | OD | Age: 28

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.50-0.25x007

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	54.5	24.0	67.6	28.2	17.2	13.1	VA C/L	18
DAY 7	64.6	44.7	74.7	31.6	21.1	8.8	VA C/L	18
DAY 14	53.3	34.9	57.5	26.1	15.3	12.3	VA C/L	17
DAY 21	51.3	33.1	65.6	28.8	18.3	15.1	VA C/L	18
DAY 28	43.0	29.3	58.4	30.7	18.5	14.6	VA C/L	20
DAY 60	36.6	21.1	46.1	26.7	15.4	10.1	VA C/L	17
DAY 90	54.5	33.4	58.4	24.4	19.2	13.1	VA C/L	17
DAY 120	56.2	32.9	94.8	49.7	24.5	20.7	VA C/L	17
DAY 150	48.2	38.3	74.7	33.6	21.7	15.8	VA C/L	18

Status: CL | Pt#: 109 | M | OS | Age: 28

CSI-T | C/L Rx: -1.75 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -1.75-0.25x003

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	53.7	19.2	68.1	36.6	13.8	18.6	VA C/L	18
DAY 7	52.9	23.8	67.6	30.2	20.9	13.5	VA C/L	17
DAY 14	43.7	29.3	47.9	22.0	15.8	14.6	VA C/L	17
DAY 21	44.7	21.4	74.1	30.7	19.8	13.4	VA C/L	17
DAY 28	45.4	18.8	55.0	21.9	12.0	8.3	VA C/L	18
DAY 60	41.7	20.4	47.9	22.6	15.4	12.1	VA C/L	18
DAY 90	53.7	36.3	56.7	31.9	18.3	12.2	VA C/L	17
DAY 120	46.8	34.9	60.3	30.9	22.7	13.6	VA C/L	17
DAY 150	46.4	25.9	44.0	20.1	18.6	13.3	VA C/L	17

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 110 | M | OD | Age: 19

CSI-T | C/L Rx: -3.50 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -3.25-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	34.9	22.9	58.9	20.9	16.6	14.5	VA C/L	17
DAY 7	30.0	22.4	46.4	28.0	16.7	19.2	VA C/L	15
DAY 14	22.6	19.3	35.5	20.1	14.1	13.9	VA C/L	17
DAY 21	14.0	13.6	17.9	13.5	11.4	9.4	VA C/L	17
DAY 28	16.7	12.9	25.9	16.6	13.4	10.7	VA C/L	14
DAY 60	25.9	20.0	33.9	14.7	17.8	15.5	VA C/L	15
DAY 90	38.6	20.1	31.9	20.7	13.9	11.3	VA C/L	17
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 110 | M | OS | Age: 19

HCII | C/L Rx: -3.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.3	21.4	50.9	24.9	20.4	17.1	VA C/L	17
DAY 7	35.2	19.6	52.9	20.6	22.7	15.7	VA C/L	14
DAY 14	26.1	15.1	30.2	16.7	12.7	13.3	VA C/L	17
DAY 21	17.5	13.5	22.0	15.1	11.7	11.3	VA C/L	17
DAY 28	24.9	14.8	54.1	24.4	12.5	10.4	VA C/L	14
DAY 60	38.0	27.3	42.3	23.1	18.2	15.7	VA C/L	15
DAY 90	34.7	21.7	42.3	28.6	15.7	13.7	VA C/L	15
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 111 | M | OD | Age: 31

CSI-T | C/L Rx: -2.00 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -1.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	80.0	40.4	110.5	42.0	16.7	17.9	VA C/L	15
DAY 7	72.4	38.6	117.5	32.9	18.2	22.4	VA C/L	15
DAY 14	51.3	39.2	105.5	17.9	23.1	16.2	VA C/L	17
DAY 21	66.8	38.0	90.5	16.5	26.3	12.4	VA C/L	17
DAY 28	51.3	27.8	82.5	12.1	24.2	11.1	VA C/L	14
DAY 60	42.7	37.2	86.4	12.9	27.3	8.7	VA C/L	17
DAY 90	67.1	38.6	91.9	31.6	23.4	16.2	VA C/L	18
DAY 120	78.8	31.4	89.1	29.5	37.4	24.4	VA C/L	17
DAY 150	59.8	41.1	85.8	28.6	30.0	11.7	VA C/L	14

Status: CL | Pt#: 111 | M | OS | Age: 31

HCII | C/L Rx: -2.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	68.1	34.4	113.9	33.1	17.9	14.8	VA C/L	15
DAY 7	59.8	31.9	94.8	39.2	21.5	20.0	VA C/L	15
DAY 14	81.9	28.4	77.6	42.7	23.6	24.4	VA C/L	17
DAY 21	68.7	31.1	113.1	42.0	32.6	17.8	VA C/L	17
DAY 28	64.1	30.4	113.1	32.4	21.9	11.6	VA C/L	15
DAY 60	62.1	32.4	105.5	37.2	27.5	11.0	VA C/L	17
DAY 90	65.6	35.2	89.8	21.4	27.1	6.4	VA C/L	18
DAY 120	60.7	46.1	71.3	21.4	23.3	14.9	VA C/L	18
DAY 150	70.8	27.1	82.5	27.3	24.2	16.7	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 113 | F | OD | Age: 26

HCII | C/L Rx: -2.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.50-0.25x010

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	60.7	50.5	95.5	34.9	25.5	23.8	VA C/L	15
DAY 7	51.7	50.5	106.3	50.5	31.9	26.7	VA C/L	14
DAY 14	51.7	46.4	85.8	19.1	37.4	24.4	VA C/L	15
DAY 21	61.2	39.5	71.3	27.8	22.6	9.3	VA C/L	17
DAY 28	44.4	39.6	87.1	27.0	26.9	22.8	VA C/L	15
DAY 60	41.1	43.0	62.1	16.5	27.3	13.2	VA C/L	18
DAY 90	51.7	43.7	61.7	31.9	27.1	13.5	VA C/L	17
DAY 120	45.0	42.3	78.8	24.7	26.3	8.1	VA C/L	18
DAY 150	38.9	37.7	52.1	11.0	20.3	4.2	VA C/L	18

Status: CL | Pt#: 113 | F | OS | Age: 26

PF | C/L Rx: -3.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -3.00-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	73.6	33.4	121.2	46.1	24.0	21.9	VA C/L	15
DAY 7	58.0	51.3	111.3	35.2	37.2	29.1	VA C/L	14
DAY 14	50.1	43.7	91.2	32.4	28.8	19.6	VA C/L	15
DAY 21	60.3	28.2	67.1	27.8	22.2	14.7	VA C/L	17
DAY 28	51.6	26.9	54.3	27.9	25.3	13.8	VA C/L	17
DAY 60	51.3	25.9	51.3	21.7	19.3	13.4	VA C/L	18
DAY 90	39.2	32.4	66.7	24.0	18.9	12.9	VA C/L	17
DAY 120	58.9	30.7	62.6	26.5	30.2	7.6	VA C/L	18
DAY 150	46.4	25.9	69.7	30.4	27.5	14.2	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 114 | F | OD | Age: 29

PF | C/L Rx: -2.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -2.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	36.5	27.6	45.3	20.8	16.5	18.3	VA C/L	18
DAY 7	43.3	30.3	52.9	29.5	19.5	20.9	VA C/L	17
DAY 14	50.9	32.9	96.2	29.1	18.3	22.0	VA C/L	17
DAY 21	44.0	26.7	89.8	33.6	25.1	23.6	VA C/L	17
DAY 28	30.4	37.5	77.0	25.9	30.9	20.9	VA C/L	17
DAY 60							VA C/L	
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 114 | F | OS | Age: 29

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	52.1	28.2	85.1	33.9	15.8	18.2	VA C/L	17
DAY 7	66.1	29.5	74.7	20.7	17.9	17.9	VA C/L	18
DAY 14	39.2	35.8	62.6	14.3	20.3	17.0	VA C/L	18
DAY 21	49.7	35.8	68.1	26.7	33.6	20.4	VA C/L	17
DAY 28	37.7	23.8	42.2	14.8	32.6	14.5	VA C/L	17
DAY 60							VA C/L	
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 115 | M | OD | Age: 25

HCII | C/L Rx: -1.50 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	68.7	29.5	81.9	36.6	15.5	19.2	VA C/L	18
DAY 7	53.7	23.4	56.7	31.6	13.7	19.2	VA C/L	15
DAY 14	46.1	16.9	38.6	26.5	11.5	12.2	VA C/L	15
DAY 21	49.7	15.4	36.0	26.3	11.4	19.6	VA C/L	17
DAY 28	38.9	15.1	35.5	25.3	10.5	16.5	VA C/L	17
DAY 60	46.1	17.0	47.5	28.8	10.4	20.7	VA C/L	14
DAY 90	44.3	14.5	34.9	29.5	11.6	16.0	VA C/L	14
DAY 120	45.0	20.9	42.3	26.7	13.1	12.9	VA C/L	14
DAY 150	48.6	28.2	73.6	29.3	20.4	15.6	VA C/L	15

Status: CL | Pt#: 115 | M | OS | Age: 25

PF | C/L Rx: -1.00 | B.C.: 8.9 | Dia: 14.4 | Spec Rx: -1.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	66.1	21.5	66.6	25.3	17.6	14.8	VA C/L	18
DAY 7	63.1	19.8	66.1	31.4	11.9	15.0	VA C/L	15
DAY 14	28.8	15.4	38.6	20.9	10.2	10.3	VA C/L	17
DAY 21	31.4	13.0	35.5	32.9	11.0	15.6	VA C/L	18
DAY 28	24.7	13.5	30.4	17.6	10.6	10.0	VA C/L	17
DAY 60	32.9	16.0	42.3	21.5	10.1	9.2	VA C/L	13
DAY 90	37.2	12.4	21.7	18.5	8.3	9.3	VA C/L	14
DAY 120	31.6	15.5	35.5	17.4	11.7	10.6	VA C/L	14
DAY 150	42.7	23.6	63.1	15.8	17.0	8.1	VA C/L	15

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 118 | F | OD | Age: 24

HCII | C/L Rx: -6.00 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -5.75-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	40.7	23.3	45.7	24.0	14.1	17.8	VA C/L	17
DAY 7	44.0	22.7	45.0	19.2	18.8	7.2	VA C/L	15
DAY 14	28.4	17.6	39.5	16.7	11.7	12.0	VA C/L	17
DAY 21	33.1	18.1	35.2	19.5	11.7	6.7	VA C/L	18
DAY 28	34.7	15.7	33.4	15.7	13.1	7.5	VA C/L	18
DAY 60	19.2	16.9	31.4	12.2	8.3	9.6	VA C/L	17
DAY 90	40.4	19.6	58.9	24.5	12.5	9.7	VA C/L	20
DAY 120	30.0	17.5	37.2	30.9	12.3	12.0	VA C/L	18
DAY 150	34.9	18.5	37.2	18.5	9.2	14.6	VA C/L	18

Status: CL | Pt#: 118 | F | OS | Age: 24

CSI-T | C/L Rx: -7.00 | B.C.: 9.35 | Dia: 14.8 | Spec Rx: -6.50-0.50x005

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	24.5	23.8	40.7	18.6	15.6	4.5	VA C/L	17
DAY 7	21.7	23.6	35.2	8.6	13.9	8.8	VA C/L	25
DAY 14	28.8	14.5	28.2	18.1	11.7	5.5	VA C/L	17
DAY 21	16.1	14.5	28.0	8.1	10.9	5.0	VA C/L	20
DAY 28	22.6	16.6	25.7	12.9	11.2	9.3	VA C/L	20
DAY 60	17.6	13.0	23.1	8.9	10.4	5.1	VA C/L	20
DAY 90	12.7	17.6	28.0	10.4	10.2	7.9	VA C/L	25
DAY 120	13.3	20.1	33.4	16.7	15.3	18.8	VA C/L	22
DAY 150	21.9	15.3	24.0	14.7	13.9	10.8	VA C/L	20

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 119 | F | OD | Age: 34

CSI-T | C/L Rx: -2.25 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	62.1	34.1	92.6	28.8	19.2	8.5	VA C/L	18
DAY 7	50.5	32.6	81.3	18.8	23.4	11.0	VA C/L	20
DAY 14	66.1	40.1	94.8	34.4	27.1	15.3	VA C/L	18
DAY 21	63.6	38.0	54.1	25.1	25.3	9.0	VA C/L	18
DAY 28	38.9	28.0	49.7	9.2	13.4	5.8	VA C/L	18
DAY 60	54.5	30.4	81.9	24.4	20.4	9.4	VA C/L	18
DAY 90	47.1	35.8	68.7	14.3	16.6	6.1	VA C/L	20
DAY 120	58.0	31.9	68.7	23.1	18.1	13.1	VA C/L	18
DAY 150	44.3	29.5	57.5	19.6	17.0	7.0	VA C/L	18

Status: CL | Pt#: 119 | F | OS | Age: 34

HCII | C/L Rx: -1.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	70.4	27.3	81.3	16.6	27.3	12.1	VA C/L	18
DAY 7	52.1	34.4	68.7	15.6	18.3	11.5	VA C/L	20
DAY 14	60.3	38.3	79.4	29.5	24.4	11.3	VA C/L	20
DAY 21	55.8	41.1	53.3	17.6	26.3	7.3	VA C/L	20
DAY 28	38.0	22.6	81.3	19.8	16.9	12.7	VA C/L	18
DAY 60	43.3	32.4	66.1	21.4	17.5	6.1	VA C/L	18
DAY 90	51.7	31.6	68.7	33.9	17.1	13.5	VA C/L	20
DAY 120	42.3	28.8	58.9	14.3	14.3	6.7	VA C/L	18
DAY 150	49.4	26.3	63.1	8.8	14.5	6.1	VA C/L	22

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status CL Pt# 120 F OD Age 26

HCII C/L Rx -3.75 B.C. 8.5 Dia 14.0 Spec Rx -3.50-0.25x075

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	54.5	26.3	53.7	23.4	16.2	11.3	VA C/L	20
DAY 7	71.9	38.9	94.8	39.5	20.7	20.0	VA C/L	18
DAY 14	58.9	25.1	65.6	28.8	17.5	18.1	VA C/L	20
DAY 21	57.1	24.0	60.7	24.0	16.2	13.3	VA C/L	17
DAY 28	46.4	19.3	52.5	20.6	12.9	11.3	VA C/L	18
DAY 60	63.6	30.7	78.8	12.2	19.1	9.2	VA C/L	18
DAY 90	33.9	28.8	35.2	18.9	20.9	7.5	VA C/L	18
DAY 120	35.8	29.5	50.5	15.5	24.2	5.3	VA C/L	18
DAY 150	48.6	33.1	90.8	14.6	20.6	7.5	VA C/L	18

Status CL Pt# 120 F OS Age 26

PF C/L Rx -3.75 B.C. 8.7 Dia 14.4 Spec Rx -4.00-0.25x120

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	47.1	29.5	44.0	16.0	19.3	3.3	VA C/L	20
DAY 7	46.4	30.4	85.8	32.6	17.2	10.2	VA C/L	20
DAY 14	49.7	25.5	61.7	20.0	17.6	10.2	VA C/L	20
DAY 21	26.1	21.4	50.9	12.0	16.5	6.1	VA C/L	18
DAY 28	58.0	22.4	67.6	22.4	16.7	5.6	VA C/L	17
DAY 60	40.1	32.4	72.4	17.2	20.0	8.0	VA C/L	18
DAY 90	63.1	31.9	85.1	20.7	20.6	7.1	VA C/L	18
DAY 120	58.9	34.9	67.1	26.1	17.2	13.3	VA C/L	18
DAY 150	42.1	31.1	44.7	16.3	19.3	7.1	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 121 | M | OD | Age: 26

HCII | C/L Rx: -2.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	86.4	39.5	102.3	34.1	27.1	24.0	VA C/L	17
DAY 7	80.0	40.1	118.4	56.2	21.9	27.5	VA C/L	15
DAY 14	63.6	39.8	107.2	45.4	26.7	21.9	VA C/L	15
DAY 21	55.4	27.3	71.3	38.3	14.9	19.2	VA C/L	15
DAY 28	74.1	27.1	83.2	35.8	19.6	20.1	VA C/L	14
DAY 60	44.0	29.1	62.1	31.6	21.4	25.3	VA C/L	14
DAY 90	72.4	35.5	97.0	38.3	25.7	24.0	VA C/L	13
DAY 120	59.8	24.9	87.8	27.5	27.5	10.9	VA C/L	15
DAY 150	75.3	40.1	68.7	42.7	26.3	11.0	VA C/L	17

Status: CL | Pt#: 121 | M | OS | Age: 26

CSI-T | C/L Rx: -3.25 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -3.00-0.25x085

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	86.4	36.6	81.9	40.1	22.4	23.4	VA C/L	17
DAY 7	65.6	39.5	94.8	47.1	26.1	27.8	VA C/L	14
DAY 14	70.3	22.4	91.9	41.1	23.3	21.5	VA C/L	15
DAY 21	48.6	18.9	60.3	27.3	14.3	12.3	VA C/L	15
DAY 28	68.7	24.2	86.4	32.1	15.1	14.2	VA C/L	14
DAY 60	58.0	28.2	91.2	33.6	17.2	17.0	VA C/L	15
DAY 90	63.1	30.4	96.1	38.9	19.5	31.4	VA C/L	13
DAY 120	69.7	41.4	91.2	41.1	28.6	27.1	VA C/L	15
DAY 150	83.8	29.3	90.5	54.5	24.2	36.0	VA C/L	15

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 122 | F | OD | Age: 22

HCII | C/L Rx: -2.50 | B.C.: 8.5 | Dia: 14.0 | Spec Rx: -2.25-0.50x100

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	74.1	43.3	106.3	30.1	17.6	28.4	VA C/L	17
DAY 7	44.0	26.1	62.6	16.9	14.3	7.6	VA C/L	17
DAY 14	56.7	29.7	49.4	17.6	16.5	13.7	VA C/L	17
DAY 21	45.4	34.4	58.9	27.3	19.5	13.9	VA C/L	17
DAY 28	56.7	28.8	60.7	24.7	15.8	16.5	VA C/L	17
DAY 60	71.3	51.3	74.1	27.3	24.0	13.6	VA C/L	17
DAY 90	74.1	44.3	103.1	27.1	32.1	13.9	VA C/L	17
DAY 120	70.8	55.8	116.6	40.4	34.4	22.0	VA C/L	17
DAY 150	64.6	36.9	99.2	55.4	19.3	22.9	VA C/L	17

Status: CL | Pt#: 122 | F | OS | Age: 22

PF | C/L Rx: -3.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -3.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	57.5	28.4	100.8	30.7	14.9	16.1	VA C/L	17
DAY 7	36.6	18.2	45.4	21.4	12.7	13.2	VA C/L	17
DAY 14	45.4	22.9	36.3	11.6	13.3	14.0	VA C/L	17
DAY 21	38.0	21.1	43.0	12.0	14.6	7.4	VA C/L	18
DAY 28	45.7	30.9	55.8	28.0	15.5	7.1	VA C/L	15
DAY 60	51.3	34.9	94.8	30.9	24.0	16.1	VA C/L	15
DAY 90	61.7	47.5	107.9	25.7	22.2	6.8	VA C/L	17
DAY 120	53.3	50.1	100.0	16.6	29.7	12.0	VA C/L	17
DAY 150	44.7	35.8	69.7	12.8	16.5	5.5	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 123 | M | OD | Age: 29

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	28.8	20.9	25.9	6.0	14.0	4.8	VA C/L	20
DAY 7	55.8	35.2	55.0	27.5	22.7	17.9	VA C/L	18
DAY 14	27.8	20.7	41.1	21.2	14.9	12.5	VA C/L	17
DAY 21	25.3	21.4	36.3	10.2	12.0	12.0	VA C/L	18
DAY 28	26.7	19.8	33.4	16.7	14.7	9.7	VA C/L	17
DAY 60	32.9	24.9	44.3	20.6	18.6	16.2	VA C/L	15
DAY 90	34.9	26.5	43.3	17.4	17.0	7.2	VA C/L	18
DAY 120	44.3	30.7	50.9	25.1	18.6	12.4	VA C/L	18
DAY 150	41.1	24.5	54.1	21.7	28.4	8.9	VA C/L	20

Status: CL | Pt#: 123 | M | OS | Age: 29

CSI-T | C/L Rx: -1.50 | B.C.: 8.6 | Dia: 14.8 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	17.1	20.1	43.3	14.3	12.7	5.0	VA C/L	20
DAY 7	23.3	22.6	31.6	15.6	14.8	8.8	VA C/L	20
DAY 14	29.3	14.7	32.4	15.5	11.1	12.8	VA C/L	18
DAY 21	23.3	17.6	29.7	13.2	12.4	11.9	VA C/L	17
DAY 28	20.7	18.5	27.3	11.9	15.0	8.1	VA C/L	20
DAY 60	22.4	21.9	47.1	16.3	15.8	16.1	VA C/L	20
DAY 90	24.7	23.9	47.9	20.3	17.8	8.4	VA C/L	20
DAY 120	40.7	24.4	58.0	26.7	19.6	19.2	VA C/L	15
DAY 150	36.6	24.4	51.7	22.4	28.6	11.3	VA C/L	20

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 124 | M | OD | Age: 21

HCII | C/L Rx: -4.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -4.25-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	39.8	28.4	51.3	14.9	14.7	21.7	VA C/L	17
DAY 7	16.6	21.2	34.1	9.3	12.5	5.3	VA C/L	22
DAY 14	38.9	31.1	33.1	8.6	17.6	11.2	VA C/L	20
DAY 21	21.9	22.4	31.1	9.1	15.7	7.2	VA C/L	17
DAY 28	21.2	20.3	32.4	6.2	17.4	5.6	VA C/L	17
DAY 60	32.4	23.8	35.8	12.2	13.5	5.6	VA C/L	17
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 124 | M | OS | Age: 21

PF | C/L Rx: -4.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -4.00-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	38.6	16.0	49.0	29.3	14.9	16.0	VA C/L	17
DAY 7	34.7	22.7	52.5	13.8	17.0	12.8	VA C/L	17
DAY 14	35.2	17.0	42.7	20.0	14.1	13.7	VA C/L	20
DAY 21	27.3	14.9	36.6	14.2	14.3	7.0	VA C/L	17
DAY 28	18.5	17.5	18.9	13.5	14.2	10.6	VA C/L	17
DAY 60	28.8	18.8	30.9	16.9	11.3	10.7	VA C/L	15
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 125 | F | OD | Age: 31

HCII | C/L Rx: -1.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25-0.25x150

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	58.4	32.9	98.5	35.5	12.6	21.4	VA C/L	17
DAY 7	52.5	27.5	74.1	38.0	20.1	16.2	VA C/L	18
DAY 14	54.5	27.5	72.4	40.4	17.4	27.3	VA C/L	15
DAY 21	48.6	18.2	59.8	20.4	16.3	15.6	VA C/L	15
DAY 28	54.5	26.1	68.1	32.9	15.3	17.9	VA C/L	18
DAY 60	50.1	24.7	83.8	28.8	17.4	14.3	VA C/L	17
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 125 | F | OS | Age: 31

PF | C/L Rx: -1.75 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.50-0.25x030

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	31.4	24.5	58.9	17.6	18.6	9.4	VA C/L	17
DAY 7	31.4	20.7	47.5	17.5	15.0	8.2	VA C/L	17
DAY 14	34.1	22.4	49.0	13.1	16.2	8.8	VA C/L	18
DAY 21	44.3	25.1	60.3	24.5	17.4	12.4	VA C/L	15
DAY 28	40.1	21.4	56.2	25.7	14.8	15.4	VA C/L	17
DAY 60	44.3	21.1	69.2	22.9	17.8	14.9	VA C/L	17
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 126 | M | OD | Age: 26

HCII | C/L Rx: -1.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.3	36.6	51.7	24.5	12.3	9.2	VA C/L	20
DAY 7	43.0	26.9	51.7	14.8	16.2	7.8	VA C/L	15
DAY 14	50.5	30.4	66.6	18.5	20.1	11.0	VA C/L	18
DAY 21	70.8	29.7	74.1	23.1	15.5	16.5	VA C/L	20
DAY 28	36.6	28.6	68.7	27.5	13.3	15.5	VA C/L	15
DAY 60	62.6	27.8	67.1	32.9	15.5	16.0	VA C/L	18
DAY 90	61.2	29.3	70.3	30.2	17.2	20.8	VA C/L	17
DAY 120	51.3	25.5	71.9	26.9	16.1	10.4	VA C/L	18
DAY 150	63.1	22.6	75.3	21.4	11.0	13.4	VA C/L	15

Status: CL | Pt#: 126 | M | OS | Age: 26

PF | C/L Rx: -1.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	58.9	42.7	89.8	26.7	15.3	13.5	VA C/L	17
DAY 7	60.7	30.7	74.7	36.3	16.7	14.6	VA C/L	15
DAY 14	60.3	32.6	88.4	58.4	18.1	15.6	VA C/L	17
DAY 21	66.6	26.7	93.3	34.1	17.6	21.5	VA C/L	20
DAY 28	55.8	33.1	96.2	52.9	17.6	20.6	VA C/L	15
DAY 60	73.6	26.3	84.5	41.4	16.9	23.4	VA C/L	18
DAY 90	46.8	30.2	91.2	24.7	14.7	10.2	VA C/L	17
DAY 120	63.1	24.7	67.1	43.3	13.9	24.7	VA C/L	18
DAY 150	56.2	22.7	89.8	39.2	12.0	21.4	VA C/L	15

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 129 | F | OD | Age: 34

PF | C/L Rx: -3.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -3.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	57.5	47.1	52.5	15.1	19.2	6.5	VA C/L	18
DAY 7	51.3	27.8	70.3	20.6	19.1	6.5	VA C/L	18
DAY 14	50.1	36.6	69.2	11.0	20.1	3.7	VA C/L	18
DAY 21	43.0	29.1	67.1	18.5	16.9	11.4	VA C/L	17
DAY 28	52.5	31.9	74.7	21.7	11.6	8.4	VA C/L	17
DAY 60	56.2	28.0	81.3	11.1	19.1	7.6	VA C/L	17
DAY 90	65.1	45.4	68.7	29.5	27.5	6.9	VA C/L	17
DAY 120	63.1	37.7	64.1	13.8	23.8	10.9	VA C/L	18
DAY 150	52.5	29.5	73.0	19.1	19.2	17.0	VA C/L	18

Status: CL | Pt#: 129 | F | OS | Age: 34

HCII | C/L Rx: -3.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	66.6	32.4	74.1	12.7	18.6	9.9	VA C/L	18
DAY 7	39.8	31.4	52.1	11.6	15.7	5.9	VA C/L	18
DAY 14	40.1	30.0	57.1	19.8	22.7	10.5	VA C/L	18
DAY 21	44.0	28.6	49.7	15.8	18.6	7.9	VA C/L	17
DAY 28	46.4	21.4	41.7	16.2	11.4	8.4	VA C/L	17
DAY 60	63.6	34.1	87.1	18.1	18.5	9.2	VA C/L	17
DAY 90	44.7	34.4	90.5	18.9	28.4	10.7	VA C/L	20
DAY 120	63.1	42.7	90.5	28.2	20.7	10.3	VA C/L	20
DAY 150	59.3	47.9	71.9	16.6	22.6	6.0	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 130 | M | OD | Age: 31

CSI-T | C/L Rx: -4.00 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -3.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	73.6	49.0	94.7	45.4	28.2	19.6	VA C/L	15
DAY 7	58.4	68.1	87.1	52.9	31.6	16.0	VA C/L	15
DAY 14	46.1	41.4	54.5	35.8	32.9	18.3	VA C/L	15
DAY 21	20.4	48.6	44.3	12.5	38.9	6.4	VA C/L	18
DAY 28	37.7	52.9	64.6	20.4	37.7	15.1	VA C/L	18
DAY 60	38.3	45.0	54.5	15.1	37.7	15.4	VA C/L	15
DAY 90	55.4	52.9	74.1	17.9	40.1	16.0	VA C/L	15
DAY 120	68.7	55.8	98.5	24.2	38.6	12.4	VA C/L	14
DAY 150	62.1	49.0	67.1	25.3	48.2	8.6	VA C/L	18

Status: CL | Pt#: 130 | M | OS | Age: 31

HCII | C/L Rx: -4.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -4.00-0.50x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	75.3	46.1	90.9	53.3	33.1	22.6	VA C/L	15
DAY 7	55.4	40.4	65.1	55.4	41.4	28.6	VA C/L	14
DAY 14	45.4	40.4	71.3	23.3	40.4	14.7	VA C/L	17
DAY 21	62.1	54.5	68.7	19.2	37.2	8.3	VA C/L	17
DAY 28	49.7	35.5	58.0	21.9	30.9	13.9	VA C/L	15
DAY 60	62.1	41.4	75.9	25.1	28.0	18.3	VA C/L	15
DAY 90	44.0	40.7	55.3	30.2	40.4	19.8	VA C/L	14
DAY 120	59.3	50.9	79.4	25.5	32.1	12.0	VA C/L	15
DAY 150	56.7	38.6	55.0	20.7	21.4	15.5	VA C/L	15

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 132 | M | OD | Age: 27

HCII | C/L Rx: -3.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.50-0.75x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	40.4	28.8	62.1	25.3	22.9	22.7	VA C/L	17
DAY 7	42.3	23.6	53.7	26.1	19.1	23.4	VA C/L	20
DAY 14	30.9	24.2	30.0	15.4	19.3	15.1	VA C/L	20
DAY 21	45.7	23.4	61.2	29.7	19.1	19.1	VA C/L	17
DAY 28	42.7	24.0	52.5	30.2	22.4	20.9	VA C/L	17
DAY 60	48.6	40.4	59.3	25.5	30.9	21.9	VA C/L	15
DAY 90	68.7	38.0	63.6	26.3	20.6	14.3	VA C/L	17
DAY 120	53.7	30.9	75.9	26.1	32.9	24.4	VA C/L	18
DAY 150	42.0	32.1	49.0	14.2	24.7	4.4	VA C/L	17

Status: CL | Pt#: 132 | M | OS | Age: 27

CSI-T | C/L Rx: -3.75 | B.C.: 8.6 | Dia: 14.8 | Spec Rx: -3.50-0.75x014

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	41.1	24.4	55.4	27.3	22.7	14.9	VA C/L	17
DAY 7	40.1	19.5	66.1	38.6	24.9	17.1	VA C/L	17
DAY 14	32.9	25.5	46.8	25.5	19.5	17.9	VA C/L	20
DAY 21	45.7	24.7	45.7	29.5	21.9	22.6	VA C/L	15
DAY 28	37.7	26.1	39.8	18.5	17.1	20.7	VA C/L	15
DAY 60	49.0	28.6	44.7	24.0	37.2	15.8	VA C/L	15
DAY 90	43.7	24.0	40.4	21.9	16.7	14.6	VA C/L	17
DAY 120	60.3	34.1	73.0	28.4	21.4	13.4	VA C/L	18
DAY 150	49.7	36.9	53.7	22.4	18.2	12.5	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status CL | Pt# 133 | F | OD | Age 34

HCII | C/L Rx -7.00 | B.C. 8.8 | Dia 14.5 | Spec Rx -7.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	63.1	39.5	87.8	35.5	36.0	13.7	VA C/L	14
DAY 7	46.8	44.0	98.0	88.4	23.4	24.5	VA C/L	14
DAY 14	49.0	41.7	89.8	29.7	28.6	13.5	VA C/L	15
DAY 21	73.0	56.2	103.1	63.6	45.7	16.5	VA C/L	14
DAY 28	63.6	44.7	79.4	28.0	30.2	14.2	VA C/L	14
DAY 60	63.1	43.3	95.5	45.0	31.6	18.5	VA C/L	17
DAY 90	55.8	25.3	80.0	52.1	30.9	21.2	VA C/L	15
DAY 120	64.6	43.7	67.1	40.7	20.1	13.9	VA C/L	14
DAY 150	50.9	32.4	60.3	25.3	31.9	12.7	VA C/L	15

Status CL | Pt# 133 | F | OS | Age 34

PF | C/L Rx -6.50 | B.C. 8.7 | Dia 14.4 | Spec Rx -7.00-0.50x015

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	67.1	41.1	89.8	34.4	31.6	22.2	VA C/L	14
DAY 7	44.3	44.7	89.8	32.4	22.9	12.5	VA C/L	15
DAY 14	58.9	50.9	85.1	39.8	32.4	17.6	VA C/L	18
DAY 21	71.3	32.4	91.9	48.2	37.7	18.6	VA C/L	14
DAY 28	63.1	25.3	70.8	34.1	25.5	15.0	VA C/L	14
DAY 60	65.6	41.1	85.1	50.5	40.1	22.2	VA C/L	17
DAY 90	50.1	32.4	92.6	44.3	25.9	19.2	VA C/L	14
DAY 120	46.8	35.2	61.2	27.1	23.1	9.1	VA C/L	14
DAY 150	54.1	32.1	61.2	32.1	24.9	15.5	VA C/L	17

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 134 | F | OD | Age: 35

HCII | C/L Rx: -2.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	60.7	40.3	77.0	33.0	22.6	17.5	VA C/L	18
DAY 7	37.4	31.9	60.7	7.9	13.3	8.6	VA C/L	22
DAY 14	42.7	30.9	47.1	15.8	16.9	7.8	VA C/L	18
DAY 21	44.0	29.3	48.2	11.4	22.9	10.6	VA C/L	18
DAY 28	30.4	22.7	45.4	6.9	13.1	4.6	VA C/L	20
DAY 60	33.4	22.7	46.8	15.1	15.1	11.5	VA C/L	18
DAY 90	50.9	22.0	48.6	16.5	20.7	5.1	VA C/L	18
DAY 120	49.7	31.6	55.0	20.7	16.0	7.9	VA C/L	18
DAY 150	47.9	29.7	38.9	16.2	13.5	8.1	VA C/L	20

Status: CL | Pt#: 134 | F | OS | Age: 35

CSI-T | C/L Rx: -2.50 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	55.0	39.3	76.4	33.1	17.6	23.6	VA C/L	18
DAY 7	60.3	31.1	68.7	31.9	16.2	21.4	VA C/L	18
DAY 14	42.0	23.3	52.1	18.8	18.6	11.4	VA C/L	17
DAY 21	50.1	34.9	52.5	24.9	18.1	16.5	VA C/L	17
DAY 28	36.6	23.1	50.1	20.3	13.2	10.0	VA C/L	18
DAY 60	32.6	22.6	46.8	19.8	10.8	16.7	VA C/L	17
DAY 90	42.0	28.8	54.1	20.0	16.3	13.1	VA C/L	18
DAY 120	55.4	24.0	76.4	29.7	15.5	18.8	VA C/L	17
DAY 150	45.0	29.7	45.7	12.7	15.7	8.0	VA C/L	17

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 135 | M | OD | Age: 24

HCII | C/L Rx: -1.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25-0.50x070

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	52.1	38.9	69.2	34.4	29.7	14.3	VA C/L	18
DAY 7	35.5	47.5	66.1	28.4	29.1	21.7	VA C/L	17
DAY 14	24.7	21.9	31.1	8.0	10.8	4.4	VA C/L	18
DAY 21	28.4	22.4	41.1	13.3	18.6	5.5	VA C/L	18
DAY 28	31.1	32.1	46.1	16.9	20.3	6.2	VA C/L	18
DAY 60	28.6	22.4	37.2	13.9	14.5	3.3	VA C/L	18
DAY 90	34.1	40.7	55.0	16.9	31.1	9.0	VA C/L	18
DAY 120	49.0	36.6	63.1	27.5	20.3	14.9	VA C/L	20
DAY 150	45.0	28.6	52.9	29.3	28.8	13.1	VA C/L	20

Status: CL | Pt#: 135 | M | OS | Age: 24

PF | C/L Rx: -1.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.25-0.50x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	41.1	43.3	83.2	20.6	24.5	4.8	VA C/L	18
DAY 7	49.7	28.4	60.7	19.1	20.0	10.1	VA C/L	18
DAY 14	28.4	17.6	35.5	17.0	12.8	9.5	VA C/L	18
DAY 21	30.2	20.3	40.4	14.8	14.2	10.3	VA C/L	18
DAY 28	37.2	25.7	46.1	16.7	22.6	9.8	VA C/L	17
DAY 60	33.1	24.0	33.9	21.9	14.6	11.0	VA C/L	17
DAY 90	52.5	31.4	62.1	20.3	24.2	9.0	VA C/L	17
DAY 120	42.3	28.6	68.1	26.5	36.6	18.8	VA C/L	18
DAY 150	59.8	35.2	63.1	42.3	28.0	17.2	VA C/L	17

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status CL | Pt# 136 | F | OD | Age 28

HCII | C/L Rx -3.25 | B.C. 8.8 | Dia 14.5 | Spec Rx -3.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	58.4	40.4	73.0	47.9	27.3	22.3	VA C/L	17
DAY 7	32.6	39.2	79.4	35.8	20.1	21.4	VA C/L	18
DAY 14	51.3	31.4	73.6	30.4	20.3	13.1	VA C/L	17
DAY 21	43.7	23.6	45.0	22.7	17.1	22.9	VA C/L	18
DAY 28	41.4	30.9	58.0	17.4	16.0	17.6	VA C/L	18
DAY 60	37.4	29.5	49.7	31.9	17.8	20.0	VA C/L	20
DAY 90	38.3	24.5	54.1	25.3	16.7	20.9	VA C/L	20
DAY 120	40.4	33.1	51.3	39.8	19.6	16.3	VA C/L	18
DAY 150	42.3	26.9	50.5	31.9	22.6	16.1	VA C/L	18

Status CL | Pt# 136 | F | OS | Age 28

CSI-T | C/L Rx -2.75 | B.C. 8.6 | Dia 13.8 | Spec Rx -2.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	55.3	52.9	94.8	33.9	19.6	13.0	VA C/L	18
DAY 7	46.8	41.4	49.7	33.6	19.5	21.4	VA C/L	20
DAY 14	36.3	26.1	63.1	23.6	14.5	12.9	VA C/L	17
DAY 21	47.1	28.4	37.7	29.1	17.4	16.2	VA C/L	18
DAY 28	24.9	19.6	25.5	22.0	13.4	14.9	VA C/L	18
DAY 60	35.2	27.3	46.4	24.5	14.0	14.1	VA C/L	18
DAY 90	30.9	21.2	39.5	29.7	16.7	20.4	VA C/L	22
DAY 120	42.1	26.1	66.6	35.8	26.7	19.5	VA C/L	18
DAY 150	35.5	30.7	40.7	17.6	13.7	14.0	VA C/L	18

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 137 | F | OD | Age: 18

HCII | C/L Rx: -1.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.7	25.9	55.8	18.5	9.1	7.5	VA C/L	18
DAY 7	35.5	19.6	41.7	22.6	11.2	13.1	VA C/L	18
DAY 14	28.2	13.7	49.0	17.6	14.0	8.1	VA C/L	20
DAY 21	32.8	11.4	44.3	13.8	12.6	10.2	VA C/L	18
DAY 28	26.9	18.2	48.6	13.2	12.0	7.9	VA C/L	18
DAY 60	34.4	17.2	53.7	18.5	12.3	14.2	VA C/L	17
DAY 90	42.7	21.7	50.5	26.7	12.6	12.5	VA C/L	17
DAY 120	46.1	20.6	58.0	19.1	18.2	11.0	VA C/L	17
DAY 150	44.0	26.7	53.7	21.1	16.1	11.8	VA C/L	17

Status: CL | Pt#: 137 | M | OS | Age: 18

CSI-T | C/L Rx: -1.50 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	43.3	16.7	46.8	26.5	8.4	14.2	VA C/L	15
DAY 7	47.5	17.0	67.6	29.7	10.1	12.0	VA C/L	17
DAY 14	47.1	14.0	63.6	13.8	21.7	9.1	VA C/L	18
DAY 21	40.7	18.6	63.6	21.4	16.0	10.0	VA C/L	17
DAY 28	33.9	13.7	44.0	12.7	9.5	8.0	VA C/L	17
DAY 60	22.0	17.4	41.4	5.7	14.3	3.8	VA C/L	17
DAY 90	50.5	15.8	62.1	15.8	14.7	17.0	VA C/L	17
DAY 120	56.7	22.7	77.6	17.1	11.6	9.3	VA C/L	17
DAY 150	55.8	25.3	72.4	26.1	20.4	17.0	VA C/L	17

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 138 | F | OD | Age: 27

PF | C/L Rx: -1.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	30.9	25.7	56.2	27.5	21.2	15.3	VA C/L	20
DAY 7	49.0	32.1	53.3	26.1	14.3	13.6	VA C/L	17
DAY 14	43.0	20.4	54.5	18.1	13.2	12.5	VA C/L	18
DAY 21	36.9	17.2	46.4	23.6	12.2	9.6	VA C/L	18
DAY 28	18.9	14.8	30.9	18.1	9.8	15.0	VA C/L	17
DAY 60	39.8	25.3	55.4	14.1	12.7	7.1	VA C/L	18
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

Status: CL | Pt#: 138 | F | OS | Age: 27

HCII | C/L Rx: -2.25 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -2.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	45.4	26.1	60.3	22.0	22.2	11.0	VA C/L	18
DAY 7	45.4	17.1	41.7	10.6	11.4	10.6	VA C/L	18
DAY 14	34.9	17.0	38.6	21.5	12.6	9.1	VA C/L	20
DAY 21	30.0	14.8	34.7	16.2	10.1	8.5	VA C/L	20
DAY 28	27.1	13.4	31.1	21.4	6.9	8.8	VA C/L	18
DAY 60	49.7	18.8	59.8	22.0	10.6	16.3	VA C/L	18
DAY 90							VA C/L	
DAY 120							VA C/L	
DAY 150							VA C/L	

CONTRAST SENSITIVITY WITH CONTACT LENSES

Status: CL | Pt#: 139 | F | OD | Age: 26

HCII | C/L Rx: -4.25 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -4.25-0.25x020

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	69.2	44.7	58.9	35.2	27.3	19.2	VA C/L	18
DAY 7	64.6	34.7	42.0	27.1	14.5	19.1	VA C/L	17
DAY 14	55.8	31.6	58.0	32.9	16.6	14.3	VA C/L	18
DAY 21	37.7	18.9	46.1	22.4	14.5	18.9	VA C/L	18
DAY 28	56.2	25.9	54.5	27.8	16.9	15.6	VA C/L	18
DAY 60	42.3	28.8	58.9	31.6	24.7	17.8	VA C/L	18
DAY 90	52.5	47.1	75.9	28.6	24.7	17.6	VA C/L	20
DAY 120	69.1	49.4	83.1	59.3	25.7	22.4	VA C/L	18
DAY 150	65.1	32.1	69.2	34.1	30.9	23.8	VA C/L	18

Status: CL | Pt#: 139 | M | OS | Age: 26

CSI-T | C/L Rx: -3.75 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -3.75-0.50x165

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	53.7	29.7	66.6	25.3	28.8	13.2	VA C/L	18
DAY 7	26.7	24.0	21.2	12.9	13.1	11.6	VA C/L	18
DAY 14	34.7	23.8	33.6	17.2	16.0	9.1	VA C/L	18
DAY 21	37.2	21.7	46.1	18.2	14.7	11.0	VA C/L	25
DAY 28	52.1	24.0	59.3	21.1	24.4	15.3	VA C/L	18
DAY 60	44.7	40.4	54.5	26.1	21.5	18.9	VA C/L	18
DAY 90	52.9	31.6	56.7	27.8	34.7	17.2	VA C/L	22
DAY 120	40.1	49.0	67.1	31.1	43.3	15.7	VA C/L	18
DAY 150	67.1	33.4	59.8	38.6	28.4	17.5	VA C/L	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 101 | F | OD | Age: 26

HCII | C/L Rx: -4.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -4.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	65.6	42.3	88.4	38.6	26.9	18.1	VA Spec.	18
DAY 7	51.7	33.4	67.1	26.9	20.3	28.2	VA Spec.	18
DAY 14	47.9	34.4	76.4	29.3	22.6	25.9	VA Spec.	17
DAY 21	64.1	43.0	91.9	32.9	28.0	14.0	VA Spec.	17
DAY 28	48.6	35.2	96.2	34.4	18.9	14.0	VA Spec.	17
DAY 60							VA Spec.	
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 101 | F | OS | Age: 26

PF | C/L Rx: -4.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -4.50-0.25x010

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	68.1	30.9	113.9	68.7	33.4	27.1	VA Spec.	17
DAY 7	44.0	25.7	70.3	39.5	19.6	14.9	VA Spec.	18
DAY 14	61.7	28.0	86.4	27.5	18.9	15.8	VA Spec.	18
DAY 21	64.6	68.1	94.8	30.4	22.0	12.9	VA Spec.	18
DAY 28	46.4	22.6	63.1	13.4	21.7	12.7	VA Spec.	17
DAY 60							VA Spec.	
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 102 | M | OD | Age: 28

PF | C/L Rx: -1.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	75.9	37.4	110.5	38.9	20.0	35.8	VA Spec.	17
DAY 7	46.4	27.3	45.7	19.3	14.8	15.1	VA Spec.	15
DAY 14	60.7	21.1	60.3	30.0	18.3	17.2	VA Spec.	15
DAY 21	74.1	28.6	64.1	31.9	14.7	17.9	VA Spec.	15
DAY 28	40.7	30.0	75.3	32.4	23.1	15.6	VA Spec.	14
DAY 60	87.1	48.2	106.2	58.0	19.2	31.1	VA Spec.	14
DAY 90	76.4	37.7	81.9	28.6	17.2	26.3	VA Spec.	15
DAY 120	71.3	48.6	84.5	43.3	24.4	18.1	VA Spec.	15
DAY 150	65.6	50.1	98.5	34.4	18.9	16.7	VA Spec.	15

Status: Spec. | Pt#: 102 | M | OS | Age: 28

HCII | C/L Rx: -1.00 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -1.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	71.9	38.3	106.9	48.6	18.1	12.0	VA Spec.	18
DAY 7	39.5	18.9	46.8	18.9	15.4	9.9	VA Spec.	17
DAY 14	47.5	18.5	63.1	25.7	14.1	12.3	VA Spec.	15
DAY 21	46.8	31.6	78.2	28.0	16.2	10.6	VA Spec.	15
DAY 28	72.3	28.8	49.7	33.1	14.6	18.1	VA Spec.	14
DAY 60	70.8	38.0	97.0	48.6	17.0	20.0	VA Spec.	14
DAY 90	55.8	55.0	104.9	35.8	34.1	24.4	VA Spec.	15
DAY 120	69.7	50.9	66.6	30.9	32.9	21.2	VA Spec.	14
DAY 150	83.2	31.1	78.8	42.0	25.9	16.9	VA Spec.	14

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 103 | F | OD | Age: 18

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00-0.50x075

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	46.8	43.3	75.9	34.7	24.4	35.8	VA Spec.	20
DAY 7	64.6	36.6	64.1	34.9	34.1	35.0	VA Spec.	17
DAY 14	42.3	21.7	44.3	32.4	28.4	21.9	VA Spec.	17
DAY 21	34.7	18.8	40.4	21.4	22.6	12.9	VA Spec.	18
DAY 28	33.4	26.9	51.7	18.1	25.9	17.5	VA Spec.	17
DAY 60	40.4	47.5	41.1	24.4	24.5	16.9	VA Spec.	18
DAY 90	30.4	32.6	53.3	31.1	27.8	17.8	VA Spec.	17
DAY 120	72.4	49.7	76.4	35.8	40.4	24.9	VA Spec.	18
DAY 150	43.0	38.6	74.7	31.6	32.6	19.5	VA Spec.	17

Status: Spec. | Pt#: 103 | F | OS | Age: 18

PF | C/L Rx: -2.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -2.25-0.25x105

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	47.1	68.1	94.8	86.4	50.6	47.6	VA Spec.	18
DAY 7	41.1	41.4	57.5	41.7	46.8	38.0	VA Spec.	20
DAY 14	38.0	27.1	52.9	45.4	19.8	24.7	VA Spec.	17
DAY 21	27.3	24.2	38.6	21.4	15.7	11.9	VA Spec.	18
DAY 28	40.4	27.8	40.7	25.9	22.2	17.0	VA Spec.	15
DAY 60	26.3	31.1	31.1	23.4	22.7	14.3	VA Spec.	18
DAY 90	47.5	28.6	53.7	28.0	16.3	19.1	VA Spec.	18
DAY 120	75.9	39.8	71.3	43.3	35.2	34.1	VA Spec.	17
DAY 150	54.1	37.4	54.5	34.4	30.9	27.8	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 104 | F | OD | Age: 29

HCII | C/L Rx: -1.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.00-0.25x010

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	39.8	22.0	55.0	29.7	15.1	12.4	VA Spec.	17
DAY 7	58.4	39.8	70.3	33.4	27.3	19.6	VA Spec.	15
DAY 14	53.7	33.6	60.7	26.7	25.3	17.8	VA Spec.	15
DAY 21	59.8	41.1	85.1	42.7	29.1	26.5	VA Spec.	15
DAY 28	39.2	33.4	60.7	21.7	22.2	10.0	VA Spec.	17
DAY 60	45.4	31.6	55.8	24.0	23.6	11.4	VA Spec.	18
DAY 90	48.2	39.5	68.1	26.3	32.7	19.2	VA Spec.	18
DAY 120	50.1	42.0	73.6	36.6	22.6	21.2	VA Spec.	15
DAY 150							VA Spec.	

Status: Spec. | Pt#: 104 | F | OS | Age: 29

PF | C/L Rx: -1.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	50.9	36.3	79.4	22.0	14.9	18.5	VA Spec.	17
DAY 7	55.0	31.6	62.6	34.4	29.5	14.1	VA Spec.	14
DAY 14	48.2	30.0	59.8	30.0	22.6	16.2	VA Spec.	15
DAY 21	47.1	34.4	65.1	33.4	27.5	26.5	VA Spec.	15
DAY 28	37.2	27.8	61.2	24.2	16.9	14.0	VA Spec.	17
DAY 60	51.3	33.9	63.1	27.3	19.3	15.6	VA Spec.	18
DAY 90	51.7	36.0	50.1	26.9	22.6	15.6	VA Spec.	17
DAY 120	49.0	31.9	82.5	29.1	23.1	18.6	VA Spec.	15
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 105 | F | OD | Age: 27

HCII | C/L Rx: -1.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	68.1	50.9	113.9	42.0	41.7	24.7	VA Spec.	15
DAY 7	65.1	33.6	1.0.5	24.9	13.0	9.9	VA Spec.	15
DAY 14	65.1	35.2	77.0	25.7	22.2	12.9	VA Spec.	14
DAY 21	62.1	29.7	69.7	26.5	22.9	16.0	VA Spec.	15
DAY 28	33.4	25.3	59.8=	25.3	17.5	14.3	VA Spec.	14
DAY 60	58.0	32.4	81.3	37.2	22.4	16.0	VA Spec.	15
DAY 90	56.2	43.3	76.4	36.9	32.9	14.8	VA Spec.	15
DAY 120	54.5	39.5	79.4	29.5	28.4	14.8	VA Spec.	15
DAY 150	50.9	30.7	60.7	17.1	24.7	7.4	VA Spec.	15

Status: Spec. | Pt#: 105 | F | OS | Age: 27

CSI-T | C/L Rx: -1.25 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	64.1	52.5	105.9	35.5	26.9	14.5	VA Spec.	15
DAY 7	52.1	30.4	69.2	24.0	16.5	13.0	VA Spec.	15
DAY 14	52.5	27.5	62.6	24.9	21.4	11.8	VA Spec.	14
DAY 21	54.5	26.5	75.9	25.9	19.5	14.0	VA Spec.	15
DAY 28	51.3	26.9	69.7	23.1	22.2	11.0	VA Spec.	14
DAY 60	54.5	33.9	67.6	21.9	21.1	11.4	VA Spec.	15
DAY 90	57.5	47.9	79.4	23.1	41.4	17.5	VA Spec.	17
DAY 120	41.4	37.7	62.1	19.3	23.1	12.7	VA Spec.	15
DAY 150	56.2	46.4	73.0	22.9	25.1	12.4	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 106 | F | OD | Age: 31

HCII | C/L Rx: -3.00 | B.C.: 8.5 | Dia: 14.0 | Spec Rx: -2.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	52.1	22.7	82.5	27.3	14.2	17.4	VA Spec.	14
DAY 7	52.9	28.8	76.4	32.9	14.5	15.8	VA Spec.	14
DAY 14	47.5	28.4	71.3	31.6	13.9	17.9	VA Spec.	14
DAY 21	41.7	21.7	66.6	21.4	9.5	14.2	VA Spec.	14
DAY 28	34.1	27.8	61.2	26.3	10.8	20.3	VA Spec.	14
DAY 60	38.6	22.4	84.5	22.6	10.2	14.0	VA Spec.	13
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 106 | F | OS | Age: 31

PF | C/L Rx: -2.75 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -2.75-0.25x008

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	54.1	27.8	69.7	42.7	13.1	20.4	VA Spec.	15
DAY 7	59.8	26.1	68.1	33.6	11.2	19.1	VA Spec.	14
DAY 14	60.3	23.1	78.2	35.5	13.3	21.2	VA Spec.	14
DAY 21	51.7	22.6	87.1	33.9	10.7	15.7	VA Spec.	14
DAY 28	50.9	29.3	65.6	35.5	13.0	21.4	VA Spec.	14
DAY 60	61.7	17.6	77.0	30.7	9.3	19.5	VA Spec.	13
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 107 | F | OD | Age: 22

CSI-T | C/L Rx: -2.00 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.7	30.7	102.8	46.4	25.0	25.8	VA Spec.	15
DAY 7	41.1	21.9	60.3	26.9	14.7	18.8	VA Spec.	17
DAY 14	37.7	18.2	38.6	18.6	10.5	10.5	VA Spec.	18
DAY 21	27.3	16.7	59.3	10.4	12.8	8.2	VA Spec.	18
DAY 28	41.4	20.0	41.4	12.5	18.1	10.5	VA Spec.	17
DAY 60	42.0	20.0	31.4	23.3	25.7	12.6	VA Spec.	17
DAY 90	35.2	34.9	53.7	16.2	15.5	18.1	VA Spec.	18
DAY 120	40.1	26.3	61.7	30.9	10.9	9.1	VA Spec.	20
DAY 150	43.7	33.4	58.0	26.3	14.6	18.2	VA Spec.	18

Status: Spec. | Pt#: 107 | F | OS | Age: 2

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	41.4	36.0	91.2	30.4	18.5	10.9	VA Spec.	15
DAY 7	36.3	29.3	51.7	18.1	12.8	19.1	VA Spec.	17
DAY 14	33.6	20.9	32.1	11.3	12.5	14.8	VA Spec.	18
DAY 21	27.8	12.6	35.5	15.5	7.0	7.2	VA Spec.	18
DAY 28	25.1	11.7	60.3	14.8	13.5	13.3	VA Spec.	17
DAY 60	36.9	18.9	36.6	8.2	12.6	7.0	VA Spec.	17
DAY 90	29.3	22.0	50.5	24.2	17.1	11.6	VA Spec.	18
DAY 120	31.9	27.5	77.0	16.5	12.3	9.6	VA Spec.	20
DAY 150	44.3	30.7	60.3	20.1	14.5	11.8	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 108 | F | OD | Age: 21

HCII | C/L Rx: -5.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -5.75-0.25x065

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.3	34.7	73.6	17.2	22.7	6.9	VA Spec.	18
DAY 7	43.3	23.8	52.9	22.4	24.4	7.4	VA Spec.	17
DAY 14	40.1	25.3	52.5	17.2	18.8	10.2	VA Spec.	18
DAY 21	47.9	24.0	59.3	24.7	19.5	17.6	VA Spec.	18
DAY 28	36.7	32.6	45.4	20.9	18.6	9.2	VA Spec.	17
DAY 60	34.7	31.1	41.1	29.7	13.1	6.4	VA Spec.	17
DAY 90	29.5	27.8	70.3	17.9	20.4	12.5	VA Spec.	17
DAY 120	33.3	27.8	51.7	15.8	13.1	5.7	VA Spec.	17
DAY 150	40.4	35.5	58.9	17.8	24.2	13.0	VA Spec.	18

Status: Spec. | Pt#: 108 | F | OS | Age: 21

PF | C/L Rx: -5.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -5.00-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	80.0	44.3	108	26.7	24.7	8.7	VA Spec.	18
DAY 7	45.4	15.1	70.3	21.7	18.8	10.6	VA Spec.	18
DAY 14	49.7	25.7	56.2	25.1	18.3	9.9	VA Spec.	18
DAY 21	52.9	30.4	71.9	24.9	20.3	13.5	VA Spec.	18
DAY 28	38.6	17.8	55.0	30.7	12.2	10.5	VA Spec.	17
DAY 60	22.2	19.2	75.3	26.9	16.2	13.2	VA Spec.	17
DAY 90	40.7	38.8	61.2	37.2	11.9	15.8	VA Spec.	17
DAY 120	52.9	19.6	54.5	36.0	15.4	14.0	VA Spec.	17
DAY 150	36.3	38.6	62.1	18.2	23.4	10.6	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 109 | M | OD | Age: 28

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.50-0.25x007

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	58.9	18.9	81.9	40.4	13.6	21.2	VA Spec.	17
DAY 7	58.0	31.9	77.6	23.8	20.4	14.8	VA Spec.	18
DAY 14	44.7	34.4	49.4	28.8	14.7	17.5	VA Spec.	17
DAY 21	46.8	24.4	59.8	27.3	14.3	15.3	VA Spec.	17
DAY 28	53.7	22.9	59.3	35.2	15.0	18.9	VA Spec.	17
DAY 60	55.0	26.9	55.8	35.8	14.7	13.5	VA Spec.	17
DAY 90	55.4	26.9	62.8	34.1	17.8	16.1	VA Spec.	17
DAY 120	52.9	30.2	58.4	36.9	16.6	21.9	VA Spec.	15
DAY 150	57.5	34.7	61.2	33.1	16.3	18.2	VA Spec.	15

Status: Spec. | Pt#: 109 | M | OS | Age: 28

CSI-T | C/L Rx: -1.75 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -1.75-0.25x003

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	64.1	26.3	71.3	38.9	13.3	20.6	VA Spec.	17
DAY 7	71.9	32.9	90.5	25.7	20.1	7.5	VA Spec.	17
DAY 14	43.3	32.9	55.4	22.0	11.7	7.9	VA Spec.	17
DAY 21	55.0	21.2	58.0	32.4	15.0	18.9	VA Spec.	17
DAY 28	42.0	22.7	63.1	20.7	17.6	7.1	VA Spec.	15
DAY 60	47.5	18.5	55.8	26.7	13.2	12.7	VA Spec.	17
DAY 90	47.5	25.1	56.7	24.9	19.5	15.5	VA Spec.	17
DAY 120	50.9	29.1	59.8	19.2	20.4	14.0	VA Spec.	15
DAY 150	50.5	27.3	54.5	19.2	13.7	12.6	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 110 | M | OD | Age: 19

CSI-T | C/L Rx: -3.50 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -3.25-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	36.0	27.8	67.6	33.1	12.4	11.1	VA Spec.	20
DAY 7	31.6	16.9	41.1	26.1	15.8	17.5	VA Spec.	17
DAY 14	26.1	17.8	29.3	18.2	11.6	13.7	VA Spec.	15
DAY 21	14.6	11.7	21.9	13.3	8.4	9.3	VA Spec.	17
DAY 28	36.6	18.2	39.2	24.5	16.0	15.5	VA Spec.	13
DAY 60	35.5	20.0	38.9	23.1	22.7	12.4	VA Spec.	17
DAY 90	29.1	22.0	36.9	30.4	15.6	16.1	VA Spec.	17
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 110 | M | OS | Age: 19

HCII | C/L Rx: -3.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	45.7	23.6	56.7	27.5	16.3	20.3	VA Spec.	17
DAY 7	29.5	19.2	42.7	17.0	21.4	13.9	VA Spec.	17
DAY 14	26.3	14.5	26.3	24.0	13.5	15.1	VA Spec.	15
DAY 21	17.0	13.5	18.5	14.1	11.3	11.8	VA Spec.	15
DAY 28	32.6	21.1	43.3	28.2	17.5	14.5	VA Spec.	13
DAY 60	28.2	19.6	39.2	19.3	19.2	12.8	VA Spec.	17
DAY 90	36.6	27.1	43.7	28.0	18.5	18.2	VA Spec.	17
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 111 | M | OD | Age: 31

CSI-T | C/L Rx: -2.00 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -1.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	56.2	54.1	77.0	29.5	30.0	17.9	VA Spec.	17
DAY 7	52.9	33.4	76.4	36.0	24.4	17.5	VA Spec.	15
DAY 14	50.9	33.9	103.1	29.7	24.4	13.8	VA Spec.	15
DAY 21	62.1	29.1	66.6	18.6	24.2	13.4	VA Spec.	17
DAY 28	53.3	28.6	77.6	20.7	21.2	9.4	VA Spec.	14
DAY 60	55.4	32.6	101.5	19.8	31.9	15.0	VA Spec.	17
DAY 90	74.1	42.0	97.7	41.1	30.0	17.1	VA Spec.	18
DAY 120	48.2	33.4	73.6	25.1	28.8	12.6	VA Spec.	17
DAY 150	56.2	33.6	54.5	19.5	25.3	8.1	VA Spec.	14

Status: Spec. | Pt#: 111 | M | OS | Age: 31

HCII | C/L Rx: -2.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	60.3	42.0	88.4	40.7	23.8	23.3	VA Spec.	17
DAY 7	59.8	31.9	73.6	33.9	19.3	24.5	VA Spec.	15
DAY 14	56.7	34.4	82.5	37.2	24.7	17.0	VA Spec.	17
DAY 21	55.0	28.2	70.8	24.7	26.3	14.5	VA Spec.	17
DAY 28	45.7	29.5	71.9	24.2	18.9	10.3	VA Spec.	15
DAY 60	44.3	29.7	59.3	20.4	18.3	9.5	VA Spec.	17
DAY 90	73.6	41.7	105.5	24.4	27.8	17.5	VA Spec.	18
DAY 120	77.0	35.5	77.6	40.1	20.4	13.8	VA Spec.	17
DAY 150	63.6	36.9	72.4	28.2	30.4	19.8	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 113 | F | OD | Age: 26

HCII | C/L Rx: -2.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.50-0.25x010

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	87.8	41.4	94.8	51.3	33.1	33.9	VA Spec.	17
DAY 7	45.7	44.3	107.2	18.1	36.6	13.9	VA Spec.	15
DAY 14	56.2	46.4	89.1	33.1	28.6	16.7	VA Spec.	15
DAY 21	57.5	42.3	68.7	27.8	22.0	20.7	VA Spec.	18
DAY 28	56.9	56.2	58.9	28.2	20.5	17.2	VA Spec.	17
DAY 60	40.7	39.2	88.4	32.1	26.7	18.3	VA Spec.	17
DAY 90	56.2	41.4	77.6	42.3	24.9	24.2	VA Spec.	15
DAY 120	60.7	42.0	103.9	38.9	29.5	12.9	VA Spec.	15
DAY 150	66.1	44.3	105.5	33.4	38.0	20.7	VA Spec.	17

Status: Spec. | Pt#: 113 | F | OS | Age: 26

PF | C/L Rx: -3.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -3.00-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	85.8	54.1	111.3	59.8	26.3	28.6	VA Spec.	15
DAY 7	85.8	54.1	120.2	56.7	29.1	25.5	VA Spec.	14
DAY 14	88.4	38.0	131.8	54.1	24.4	28.4	VA Spec.	14
DAY 21	80.7	34.1	83.2	36.9	20.4	23.1	VA Spec.	17
DAY 28	65.3	38.5	126.6	45.7	32.9	23.7	VA Spec.	15
DAY 60	91.2	41.1	106.3	42.3	17.6	26.7	VA Spec.	17
DAY 90	68.1	30.9	81.9	47.1	29.3	26.9	VA Spec.	14
DAY 120	55.0	31.9	70.8	32.4	20.9	17.6	VA Spec.	17
DAY 150	91.9	49.0	145.7	43.0	26.7	26.1	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 114 | F | OD | Age: 29

PF | C/L Rx: -2.25 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -2.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	69.2	33.4	127.8	57.5	19.6	20.7	VA Spec.	18
DAY 7	56.2	38.0	73.0	32.9	21.4	24.4	VA Spec.	17
DAY 14	44.7	34.7	62.6	31.9	17.2	21.2	VA Spec.	17
DAY 21	41.1	33.1	75.3	29.7	30.4	24.2	VA Spec.	15
DAY 28	43.0	29.7	56.2	27.5	19.3	18.2	VA Spec.	15
DAY 60							VA Spec.	
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 114 | F | OS | Age: 29

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	55.0	35.8	103.1	44.3	21.5	23.8	VA Spec.	18
DAY 7	53.3	34.1	70.3	33.9	23.8	29.5	VA Spec.	17
DAY 14	46.1	31.4	68.7	27.3	20.9	18.8	VA Spec.	17
DAY 21	56.7	32.6	75.9	34.1	25.3	25.3	VA Spec.	15
DAY 28	45.4	24.9	65.1	31.4	26.9	18.2	VA Spec.	17
DAY 60							VA Spec.	
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 115 | M | OD | Age: 25

HCII | C/L Rx: -1.50 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	71.9	38.0	88.4	47.9	17.1	29.7	VA Spec.	18
DAY 7	73.0	24.9	68.1	41.4	12.2	17.5	VA Spec.	14
DAY 14	45.7	14.0	44.3	31.4	10.8	20.0	VA Spec.	15
DAY 21	38.9	13.2	32.6	23.3	9.8	11.7	VA Spec.	15
DAY 28	40.4	12.5	43.3	25.9	10.7	11.3	VA Spec.	15
DAY 60	32.4	13.4	36.3	19.6	8.4	11.0	VA Spec.	14
DAY 90	37.4	11.8	28.4	24.7	7.9	9.7	VA Spec.	14
DAY 120	39.8	17.8	68.7	34.9	13.3	15.4	VA Spec.	14
DAY 150	58.0	26.5	63.6	35.5	18.2	17.1	VA Spec.	14

Status: Spec. | Pt#: 115 | M | OS | Age: 25

PF | C/L Rx: -1.00 | B.C.: 8.9 | Dia: 14.4 | Spec Rx: -1.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	72.4	27.3	75.9	36.6	17.6	17.1	VA Spec.	17
DAY 7	56.7	14.9	62.3	26.7	8.3	12.6	VA Spec.	15
DAY 14	49.7	12.5	50.5	23.6	9.5	12.4	VA Spec.	17
DAY 21	31.6	10.2	38.8	27.5	9.7	18.1	VA Spec.	15
DAY 28	36.3	11.7	37.4	33.6	10.3	14.1	VA Spec.	17
DAY 60	34.7	14.3	45.0	24.5	8.4	13.5	VA Spec.	14
DAY 90	26.1	10.6	32.1	19.5	8.3	6.5	VA Spec.	14
DAY 120	50.1	20.1	75.3	18.1	15.6	5.4	VA Spec.	13
DAY 150	46.4	22.2	62.1	26.5	15.8	11.3	VA Spec.	14

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 118 | F | OD | Age: 24

HCII | C/L Rx: -6.00 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -5.75-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	26.1	26.5	58.9	11.2	15.0	14.6	VA Spec.	18
DAY 7	31.4	21.7	31.1	7.8	15.3	7.0	VA Spec.	15
DAY 14	33.9	16.6	40.4	23.1	8.9	12.7	VA Spec.	18
DAY 21	21.1	14.0	27.5	9.8	8.6	4.8	VA Spec.	18
DAY 28	16.5	15.5	30.9	7.8	9.5	6.8	VA Spec.	18
DAY 60	32.4	17.0	41.1	22.2	13.6	12.8	VA Spec.	18
DAY 90	23.1	11.0	30.7	16.7	6.8	8.0	VA Spec.	18
DAY 120	23.8	24.0	36.0	25.5	22.4	14.6	VA Spec.	18
DAY 150	12.0	21.9	25.5	16.7	12.6	12.2	VA Spec.	18

Status: Spec. | Pt#: 118 | F | OS | Age: 24

CSI-T | C/L Rx: -7.00 | B.C.: 9.35 | Dia: 14.8 | Spec Rx: -6.50-0.50x005

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	18.9	26.3	39.2	10.3	14.5	8.0	VA Spec.	18
DAY 7	18.2	16.5	21.4	9.6	11.1	6.1	VA Spec.	18
DAY 14	17.6	16.1	28.4	19.6	9.3	8.6	VA Spec.	18
DAY 21	15.0	12.6	33.6	7.8	10.8	6.3	VA Spec.	18
DAY 28	14.7	17.9	21.9	7.6	9.8	4.5	VA Spec.	18
DAY 60	22.2	17.0	34.9	12.4	10.7	8.1	VA Spec.	17
DAY 90	14.1	22.2	47.5	9.4	14.3	7.3	VA Spec.	18
DAY 120	21.5	21.7	34.1	17.1	18.1	10.0	VA Spec.	18
DAY 150	23.3	24.7	24.9	12.6	18.9	14.8	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 119 | F | OD | Age: 34

CSI-T | C/L Rx: -2.25 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	95.5	36.6	112.2	47.5	21.7	29.5	VA Spec.	15
DAY 7	59.8	37.2	72.4	23.4	27.3	9.3	VA Spec.	20
DAY 14	50.5	36.3	111.3	44.3	25.3	14.9	VA Spec.	18
DAY 21	91.9	32.9	126.9	44.3	25.7	17.4	VA Spec.	18
DAY 28	88.4	42.0	110.5	36.9	30.2	17.1	VA Spec.	18
DAY 60	58.0	36.3	96.2	31.9	24.2	15.4	VA Spec.	18
DAY 90	52.5	37.7	78.2	27.5	18.8	12.0	VA Spec.	15
DAY 120	55.8	24.9	70.8	21.1	14.1	11.1	VA Spec.	17
DAY 150	62.1	32.9	74.1	27.1	15.1	11.2	VA Spec.	18

Status: Spec. | Pt#: 119 | F | OS | Age: 34

HCII | C/L Rx: -1.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	92.6	36.0	139.1	33.1	20.0	24.5	VA Spec.	15
DAY 7	60.3	34.4	73.6	21.5	20.4	7.2	VA Spec.	20
DAY 14	45.0	32.9	68.1	18.3	23.3	10.6	VA Spec.	18
DAY 21	40.1	31.1	67.1	14.7	26.3	7.2	VA Spec.	20
DAY 28	45.0	26.1	80.0	17.8	18.9	6.7	VA Spec.	22
DAY 60	41.7	29.3	61.2	17.4	18.2	10.0	VA Spec.	18
DAY 90	50.9	23.1	65.1	19.2	15.3	9.8	VA Spec.	17
DAY 120	26.7	21.1	52.1	21.4	13.5	11.2	VA Spec.	17
DAY 150	47.9	24.5	65.1	26.9	16.5	12.4	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 120 | F | OD | Age: 26

HCII | C/L Rx: -3.75 | B.C.: 8.5 | Dia: 14.0 | Spec Rx: -3.50-0.25x075

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	85.1	59.3	120.2	37.7	24.5	15.3	VA Spec.	18
DAY 7	41.1	30.2	70.3	29.3	19.2	14.7	VA Spec.	20
DAY 14	58.9	22.6	52.5	23.4	12.7	11.5	VA Spec.	18
DAY 21	50.5	20.3	65.6	24.5	13.7	11.0	VA Spec.	18
DAY 28	41.1	19.6	56.7	23.8	17.0	11.7	VA Spec.	18
DAY 60	51.7	25.9	67.1	23.4	16.6	13.1	VA Spec.	18
DAY 90	56.7	31.4	65.6	32.1	15.5	11.7	VA Spec.	18
DAY 120	48.6	28.2	65.6	16.2	20.6	6.9	VA Spec.	18
DAY 150	31.6	25.5	40.4	8.8	14.3	5.1	VA Spec.	20

Status: Spec. | Pt#: 120 | F | OS | Age: 26

PF | C/L Rx: -3.75 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -4.00-0.25x120

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	74.7	50.1	90.5	26.5	31.6	13.4	VA Spec.	18
DAY 7	54.5	30.0	74.7	18.5	17.0	13.8	VA Spec.	20
DAY 14	46.4	23.8	60.3	17.4	16.5	9.1	VA Spec.	18
DAY 21	42.0	14.8	41.1	11.4	17.0	7.6	VA Spec.	18
DAY 28	49.7	20.1	72.4	23.8	18.1	10.7	VA Spec.	18
DAY 60	53.7	29.1	77.0	25.5	15.5	14.0	VA Spec.	18
DAY 90	64.1	32.1	88.4	29.5	22.6	13.7	VA Spec.	18
DAY 120	47.1	30.2	67.6	17.0	24.4	8.4	VA Spec.	18
DAY 150	55.4	21.1	52.1	15.3	16.2	13.5	VA Spec.	17

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 121 | M | OD | Age: 26

HCII | C/L Rx: -2.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.00-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	64.6	53.7	91.2	63.6	28.0	24.0	VA Spec.	18
DAY 7	62.6	39.2	81.3	58.0	27.1	22.0	VA Spec.	14
DAY 14	55.8	27.8	91.9	42.0	20.6	24.7	VA Spec.	17
DAY 21	87.8	30.2	97.7	31.1	17.4	12.5	VA Spec.	15
DAY 28	64.6	22.0	91.2	33.9	15.3	17.8	VA Spec.	14
DAY 60	62.6	29.3	74.6	49.4	18.8	29.7	VA Spec.	15
DAY 90	66.1	37.7	111.3	52.5	31.1	32.4	VA Spec.	15
DAY 120	78.2	36.6	109.6	52.5	28.8	26.9	VA Spec.	14
DAY 150	94.9	39.8	110.5	64.1	24.5	24.4	VA Spec.	15

Status: Spec. | Pt#: 121 | M | OS | Age: 26

CSI-T | C/L Rx: -3.25 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -3.00-0.25x085

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	39.8	49.0	58.9	25.1	25.7	14.2	VA Spec.	18
DAY 7	78.2	34.7	105.5	52.9	23.6	24.2	VA Spec.	14
DAY 14	68.1	24.2	73.6	34.1	19.5	12.6	VA Spec.	15
DAY 21	85.8	26.5	102.3	41.4	19.6	22.7	VA Spec.	15
DAY 28	53.3	20.6	77.6	25.1	17.6	12.5	VA Spec.	14
DAY 60	58.9	28.4	86.4	36.6	19.2	17.0	VA Spec.	15
DAY 90	75.3	33.1	92.6	55.8	25.3	25.5	VA Spec.	15
DAY 120	70.3	34.7	101.5	45.4	30.4	23.6	VA Spec.	14
DAY 150	70.3	28.2	97.0	48.6	21.9	34.1	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 122 | F | OD | Age: 22

HCII | C/L Rx: -2.50 | B.C.: 8.5 | Dia: 14.0 | Spec Rx: -2.25-0.50x100

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	35.8	44.0	46.1	22.0	34.1	5.8	VA Spec.	18
DAY 7	34.4	27.1	50.1	17.8	16.3	12.4	VA Spec.	15
DAY 14	39.5	23.4	39.2	22.2	13.1	15.6	VA Spec.	15
DAY 21	52.5	31.4	50.5	24.5	16.6	8.4	VA Spec.	15
DAY 28	55.4	34.4	64.6	19.5	16.5	10.5	VA Spec.	17
DAY 60	68.1	61.2	93.3	31.9	25.1	7.4	VA Spec.	15
DAY 90	80.7	71.9	103.1	47.9	31.6	8.8	VA Spec.	17
DAY 120	73.0	53.7	99.2	17.1	24.7	5.8	VA Spec.	15
DAY 150	67.6	38.3	101.5	33.4	21.5	13.3	VA Spec.	14

Status: Spec. | Pt#: 122 | F | OS | Age: 22

PF | C/L Rx: -3.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -3.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	47.5	38.9	59.3	21.1	25.5	11.9	VA Spec.	18
DAY 7	33.9	19.6	52.9	19.6	16.1	12.1	VA Spec.	15
DAY 14	41.1	22.9	51.3	18.9	13.2	6.5	VA Spec.	14
DAY 21	45.7	28.4	52.9	24.4	17.5	13.6	VA Spec.	15
DAY 28	42.0	31.1	54.1	23.3	18.6	10.6	VA Spec.	15
DAY 60	54.1	44.3	87.1	23.1	20.0	10.2	VA Spec.	14
DAY 90	75.9	78.2	81.3	37.4	32.4	14.6	VA Spec.	17
DAY 120	57.1	39.5	65.1	27.1	20.4	16.0	VA Spec.	15
DAY 150	58.9	41.7	75.3	21.7	17.4	11.1	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 123 | M | OD | Age: 29

HCII | C/L Rx: -2.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	59.3	32.4	57.5	37.7	26.3	21.4	VA Spec.	17
DAY 7	38.9	26.3	54.5	13.2	13.1	6.9	VA Spec.	20
DAY 14	41.4	22.2	49.4	20.4	11.2	13.2	VA Spec.	18
DAY 21	33.1	24.5	48.2	18.3	12.3	9.8	VA Spec.	18
DAY 28	35.5	20.1	51.3	15.8	12.7	9.8	VA Spec.	18
DAY 60	32.4	28.8	66.1	25.7	17.1	16.5	VA Spec.	17
DAY 90	44.7	26.7	54.5	20.6	18.8	10.3	VA Spec.	17
DAY 120	47.5	32.9	79.4	35.2	31.9	21.9	VA Spec.	17
DAY 150	51.7	26.5	70.8	34.1	23.8	21.2	VA Spec.	20

Status: Spec. | Pt#: 123 | M | OS | Age: 29

CSI-T | C/L Rx: -1.50 | B.C.: 8.6 | Dia: 14.8 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.7	34.4	57.5	20.9	23.3	11.4	VA Spec.	17
DAY 7	34.4	17.8	38.3	19.5	11.8	9.5	VA Spec.	22
DAY 14	32.4	17.5	50.5	11.5	13.0	10.9	VA Spec.	18
DAY 21	32.4	16.5	44.3	13.2	14.3	8.4	VA Spec.	18
DAY 28	27.9	18.8	41.7	16.0	14.2	10.9	VA Spec.	17
DAY 60	16.1	22.9	36.0	15.7	17.2	9.5	VA Spec.	33
DAY 90	39.5	24.4	53.3	18.1	16.1	8.9	VA Spec.	17
DAY 120	56.7	26.9	75.9	30.4	24.4	23.6	VA Spec.	15
DAY 150	38.6	28.2	57.1	24.9	19.6	21.7	VA Spec.	20

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 124 | M | OD | Age: 21

HCII | C/L Rx: -4.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -4.25-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	82.5	35.5	91.9	25.3	38.9	20.1	VA Spec.	17
DAY 7	17.9	29.3	37.2	9.5	17.2	8.6	VA Spec.	25
DAY 14	29.3	35.5	44.7	10.8	18.6	6.2	VA Spec.	18
DAY 21	22.9	16.5	31.6	11.7	11.5	6.8	VA Spec.	17
DAY 28	22.2	16.0	23.1	10.5	12.6	5.5	VA Spec.	18
DAY 60	15.5	16.0	21.5	3.9	10.1	3.0	VA Spec.	17
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 124 | M | OS | Age: 21

PF | C/L Rx: -4.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -4.00-0.25x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	51.7	24.2	58.0	34.7	17.9	16.2	VA Spec.	17
DAY 7	26.1	12.6	34.7	14.2	17.5	9.1	VA Spec.	20
DAY 14	34.1	19.8	40.7	17.0	12.1	12.1	VA Spec.	18
DAY 21	20.1	16.7	32.9	11.7	11.9	9.3	VA Spec.	17
DAY 28	17.5	14.6	19.5	6.8	10.5	4.7	VA Spec.	18
DAY 60	25.1	15.8	31.6	14.7	13.2	7.4	VA Spec.	17
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 125 | F | OD | Age: 31

HCII | C/L Rx: -1.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25-0.25x150

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	52.1	30.4	81.3	33.4	21.5	20.3	VA Spec.	15
DAY 7	45.0	23.3	71.9	32.1	14.5	20.9	VA Spec.	18
DAY 14	50.5	23.4	70.3	36.0	15.0	16.9	VA Spec.	17
DAY 21	49.4	25.5	74.7	37.7	16.1	19.6	VA Spec.	17
DAY 28	48.6	26.5	63.1	38.3	17.0	17.5	VA Spec.	14
DAY 60	36.9	28.6	55.8	26.3	16.7	18.6	VA Spec.	15
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 125 | F | OS | Age: 31

PF | C/L Rx: -1.75 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.50-0.25x030

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	61.7	30.9	77.6	25.7	15.4	11.4	VA Spec.	15
DAY 7	59.3	24.5	98.5	26.1	13.9	15.0	VA Spec.	18
DAY 14	63.6	26.5	60.7	36.6	18.3	14.0	VA Spec.	17
DAY 21	40.7	17.6	56.2	20.6	15.0	12.9	VA Spec.	17
DAY 28	45.4	23.6	60.3	34.4	14.6	17.0	VA Spec.	14
DAY 60	47.5	23.6	52.5	35.8	17.6	22.9	VA Spec.	15
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 126 | M | OD | Age: 26

HCII | C/L Rx: -1.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	40.4	42.7	65.6	29.5	15.1	10.6	VA Spec.	18
DAY 7	36.6	26.7	57.5	25.7	14.0	13.6	VA Spec.	17
DAY 14	55.4	29.5	85.1	31.9	16.5	21.1	VA Spec.	15
DAY 21	38.3	24.7	65.1	24.4	16.0	11.0	VA Spec.	18
DAY 28	49.0	28.4	66.6	30.9	11.6	19.2	VA Spec.	15
DAY 60	54.5	22.4	64.1	36.0	12.6	17.5	VA Spec.	17
DAY 90	80.7	29.5	81.3	33.4	13.5	19.8	VA Spec.	15
DAY 120	56.7	29.1	88.4	23.1	14.6	12.4	VA Spec.	18
DAY 150	41.4	17.9	69.2	24.2	11.3	13.9	VA Spec.	17

Status: Spec. | Pt#: 126 | M | OS | Age: 26

PF | C/L Rx: -1.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	54.1	41.4	67.1	31.6	12.4	18.3	VA Spec.	18
DAY 7	48.6	31.1	80.7	33.6	18.1	20.0	VA Spec.	15
DAY 14	50.9	27.5	74.1	27.3	14.7	13.9	VA Spec.	17
DAY 21	58.4	27.1	85.1	41.4	17.5	20.7	VA Spec.	18
DAY 28	55.8	30.0	80.7	44.0	12.0	22.7	VA Spec.	15
DAY 60	44.3	25.3	89.1	29.7	12.5	18.5	VA Spec.	15
DAY 90	59.8	23.1	90.5	32.1	13.2	18.5	VA Spec.	15
DAY 120	44.0	17.1	80.7	19.5	11.7	15.5	VA Spec.	17
DAY 150	45.4	17.1	46.4	29.3	10.0	17.5	VA Spec.	17

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 129 | F | OD | Age: 34

PF | C/L Rx: -3.00 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -3.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	68.1	42.3	75.3	28.6	19.3	12.1	VA Spec.	17
DAY 7	55.8	35.5	75.9	26.3	15.6	13.0	VA Spec.	18
DAY 14	46.1	39.2	69.7	20.6	17.8	10.9	VA Spec.	18
DAY 21	35.5	35.8	49.4	25.5	13.7	15.5	VA Spec.	17
DAY 28	42.3	23.6	44.7	21.1	14.5	9.1	VA Spec.	18
DAY 60	39.2	36.0	48.6	26.7	21.4	14.5	VA Spec.	17
DAY 90	57.1	41.7	108.0	28.4	22.7	13.8	VA Spec.	18
DAY 120	42.7	35.2	45.7	27.1	17.2	14.6	VA Spec.	17
DAY 150	61.7	43.7	107.2	32.9	24.4	20.0	VA Spec.	15

Status: Spec. | Pt#: 129 | F | OS | Age: 34

HCII | C/L Rx: -3.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.00 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	63.6	36.6	93.3	24.4	25.3	13.9	VA Spec.	17
DAY 7	42.0	30.4	78.2	23.8	16.1	8.9	VA Spec.	18
DAY 14	42.0	33.6	54.1	17.5	15.3	8.5	VA Spec.	18
DAY 21	37.7	26.3	46.1	15.4	13.7	8.6	VA Spec.	17
DAY 28	35.8	23.1	44.3	13.6	14.1	8.9	VA Spec.	18
DAY 60	49.4	33.1	72.4	23.4	17.1	8.5	VA Spec.	17
DAY 90	62.1	43.3	94.8	28.2	25.7	13.0	VA Spec.	18
DAY 120	68.1	41.1	71.9	36.3	21.4	19.6	VA Spec.	17
DAY 150	80.0	47.9	111.3	31.6	17.5	15.6	VA Spec.	17

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 130 | M | OD | Age: 31

CSI-T | C/L Rx: -4.00 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -3.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	43.7	55.4	61.2	42.7	26.9	16.0	VA Spec.	15
DAY 7	47.1	48.2	65.6	34.7	26.9	21.7	VA Spec.	17
DAY 14	31.4	45.4	79.4	20.3	40.7	31.4	VA Spec.	17
DAY 21	45.7	55.8	45.4	24.4	38.6	31.1	VA Spec.	18
DAY 28	42.7	33.1	57.5	20.3	24.5	10.7	VA Spec.	17
DAY 60	57.5	39.8	55.0	24.0	27.3	14.6	VA Spec.	15
DAY 90	69.7	46.4	107.2	38.9	32.6	24.7	VA Spec.	14
DAY 120	74.1	49.7	105.5	34.4	29.7	16.0	VA Spec.	14
DAY 150	49.0	43.7	78.8	19.6	25.3	13.6	VA Spec.	15

Status: Spec. | Pt#: 130 | M | OS | Age: 31

HCII | C/L Rx: -4.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -4.00-0.50x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	79.4	41.1	107.2	32.9	40.4	24.9	VA Spec.	17
DAY 7	42.7	55.4	71.3	24.2	30.4	16.7	VA Spec.	17
DAY 14	64.6	57.5	89.1	25.9	40.4	24.0	VA Spec.	17
DAY 21	52.9	45.0	50.5	30.0	39.2	14.1	VA Spec.	18
DAY 28	34.7	35.8	58.4	20.3	32.6	11.5	VA Spec.	17
DAY 60	53.3	32.1	61.2	26.7	32.9	15.1	VA Spec.	15
DAY 90	65.6	38.9	99.2	40.1	44.3	28.6	VA Spec.	14
DAY 120	81.9	37.2	84.1	34.4	39.8	13.2	VA Spec.	15
DAY 150	52.5	40.1	63.1	21.5	28.4	16.6	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 132 | M | OD | Age: 27

HCII | C/L Rx: -3.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.50-0.75x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.0	33.4	63.1	29.7	24.4	15.3	VA Spec.	17
DAY 7	46.8	22.7	67.6	28.2	19.8	12.0	VA Spec.	18
DAY 14	50.5	28.0	49.0	27.5	17.9	17.5	VA Spec.	17
DAY 21	44.0	32.9	56.7	21.1	23.3	23.6	VA Spec.	18
DAY 28	56.7	30.4	58.9	24.5	15.8	17.8	VA Spec.	17
DAY 60	39.8	32.1	52.9	17.6	21.9	15.6	VA Spec.	15
DAY 90	28.0	33.1	43.0	17.2	27.1	7.6	VA Spec.	18
DAY 120	40.1	24.9	43.0	14.1	12.7	11.2	VA Spec.	18
DAY 150	61.2	42.7	81.9	23.8	16.5	12.6	VA Spec.	20

Status: Spec. | Pt#: 132 | M | OS | Age: 27

CSI-T | C/L Rx: -3.75 | B.C.: 8.6 | Dia: 14.8 | Spec Rx: -3.50-0.75x014

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	65.1	32.1	80.0	38.0	28.2	20.4	VA Spec.	18
DAY 7	46.4	26.1	52.1	28.0	23.4	26.9	VA Spec.	17
DAY 14	49.0	28.6	53.7	28.6	20.4	22.6	VA Spec.	17
DAY 21	45.0	30.0	46.4	26.3	17.1	18.8	VA Spec.	18
DAY 28	60.7	27.5	64.5	36.9	25.1	32.4	VA Spec.	17
DAY 60	63.6	27.5	80.7	27.8	20.1	20.0	VA Spec.	17
DAY 90	56.7	30.7	77.0	30.0	20.4	13.1	VA Spec.	18
DAY 120	67.6	32.1	66.1	27.3	24.5	25.1	VA Spec.	18
DAY 150	51.3	30.2	57.5	19.2	20.7	13.8	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 133 | F | OD | Age: 34

HCII | C/L Rx: -7.00 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -7.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	46.1	44.0	74.7	22.6	21.1	14.0	VA Spec.	18
DAY 7	51.7	39.5	78.8	31.6	29.5	12.9	VA Spec.	20
DAY 14	46.4	41.1	94.0	34.1	29.5	15.1	VA Spec.	18
DAY 21	64.1	47.5	80.0	24.9	45.0	9.5	VA Spec.	15
DAY 28	29.5	38.6	50.5	15.4	27.8	7.0	VA Spec.	17
DAY 60	37.7	51.7	78.2	36.9	34.7	20.4	VA Spec.	15
DAY 90	24.0	37.7	60.7	16.6	20.0	3.7	VA Spec.	15
DAY 120	22.2	32.4	47.1	9.5	17.1	7.1	VA Spec.	14
DAY 150	25.9	52.9	63.1	14.6	25.3	5.6	VA Spec.	14

Status: Spec. | Pt#: 133 | F | OS | Age: 34

PF | C/L Rx: -6.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -7.00-0.50x015

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	39.2	36.3	89.8	65.1	31.1	17.8	VA Spec.	18
DAY 7	48.6	49.4	67.6	43.3	40.7	17.5	VA Spec.	17
DAY 14	88.4	48.6	92.6	47.1	30.9	23.6	VA Spec.	15
DAY 21	48.2	33.1	79.4	28.8	40.7	9.8	VA Spec.	17
DAY 28	31.4	43.7	59.8	22.2	32.1	10.2	VA Spec.	17
DAY 60	66.6	48.6	91.9	41.1	28.4	18.9	VA Spec.	14
DAY 90	32.6	29.5	37.4	25.5	28.0	4.8	VA Spec.	18
DAY 120	40.4	31.6	55.8	26.9	19.8	16.1	VA Spec.	14
DAY 150	29.1	29.1	44.0	18.2	21.7	13.2	VA Spec.	14

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 134 | F | OD | Age: 35

HCII | C/L Rx: -2.75 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -2.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	60.7	66.6	83.8	37.2	11.2	22.2	VA Spec.	17
DAY 7	38.6	39.2	56.2	24.4	17.8	12.0	VA Spec.	17
DAY 14	53.7	33.1	61.2	23.8	20.6	13.4	VA Spec.	18
DAY 21	40.4	30.7	65.6	15.7	17.8	7.7	VA Spec.	18
DAY 28	33.9	26.1	47.1	7.6	18.2	6.6	VA Spec.	18
DAY 60	38.6	24.7	56.7	10.5	14.1	7.0	VA Spec.	20
DAY 90	46.8	22.7	69.2	24.4	16.5	12.2	VA Spec.	18
DAY 120	47.1	26.1	55.8	13.6	14.9	6.4	VA Spec.	18
DAY 150	55.0	28.6	55.8	24.7	15.1	11.5	VA Spec.	20

Status: Spec. | Pt#: 134 | F | OS | Age: 35

CSI-T | C/L Rx: -2.50 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	63.6	33.1	88.4	39.8	16.0	33.6	VA Spec.	18
DAY 7	79.4	28.8	80.0	27.5	18.2	20.1	VA Spec.	17
DAY 14	54.5	28.6	78.8	44.7	17.9	21.1	VA Spec.	18
DAY 21	57.5	32.6	63.1	28.6	15.8	18.6	VA Spec.	17
DAY 28	48.2	22.2	61.2	23.6	17.0	11.7	VA Spec.	17
DAY 60	45.4	27.8	54.5	22.2	13.8	13.9	VA Spec.	17
DAY 90	65.1	27.5	78.2	26.1	15.8	7.5	VA Spec.	17
DAY 120	61.2	23.8	63.6	32.6	16.5	17.6	VA Spec.	18
DAY 150	47.5	25.5	49.0	22.0	16.1	11.1	VA Spec.	20

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 135 | M | OD | Age: 24

HCII | C/L Rx: -1.50 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25-0.50x070

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	45.7	50.5	93.3	30.4	23.8	18.9	VA Spec.	15
DAY 7	30.9	33.1	39.8	12.5	20.6	6.6	VA Spec.	17
DAY 14	29.5	20.7	37.7	19.2	14.5	7.1	VA Spec.	18
DAY 21	27.3	19.6	39.8	21.4	14.7	10.6	VA Spec.	17
DAY 28	41.1	28.4	62.1	21.2	17.9	12.9	VA Spec.	17
DAY 60	15.4	20.0	28.8	11.4	20.7	4.0	VA Spec.	17
DAY 90	36.9	34.9	42.3	19.8	24.0	10.1	VA Spec.	18
DAY 120	40.4	36.9	64.1	28.2	28.6	16.2	VA Spec.	17
DAY 150	39.5	36.9	58.0	23.1	22.9	12.1	VA Spec.	18

Status: Spec. | Pt#: 135 | M | OS | Age: 24

PF | C/L Rx: -1.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.25-0.50x090

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	58.0	46.4	92.1	37.7	33.1	20.7	VA Spec.	17
DAY 7	30.9	34.7	46.8	20.3	22.7	9.8	VA Spec.	17
DAY 14	25.1	22.9	33.1	17.5	14.9	13.1	VA Spec.	17
DAY 21	30.0	21.1	33.9	24.7	16.5	13.4	VA Spec.	17
DAY 28	43.0	25.3	55.0	22.2	17.2	10.2	VA Spec.	15
DAY 60	35.2	26.7	45.7	21.4	20.9	11.0	VA Spec.	17
DAY 90	25.3	26.7	29.5	11.7	24.7	7.2	VA Spec.	18
DAY 120	40.1	37.4	55.0	32.6	19.6	16.2	VA Spec.	18
DAY 150	42.3	26.9	49.4	17.1	19.3	9.1	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 136 | F | OD | Age: 28

HCII | C/L Rx: -3.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -3.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	66.1	30.4	108.8	39.5	17.9	14.7	VA Spec.	18
DAY 7	50.1	32.4	132.8	26.5	28.4	16.2	VA Spec.	17
DAY 14	35.5	27.5	55.4	19.5	14.3	9.0	VA Spec.	20
DAY 21	36.3	24.0	55.4	10.6	17.6	12.2	VA Spec.	22
DAY 28	36.3	24.4	62.1	13.2	13.7	9.3	VA Spec.	18
DAY 60	58.9	28.4	54.1	29.3	18.9	12.6	VA Spec.	18
DAY 90	62.6	29.3	78.8	34.4	19.3	28.2	VA Spec.	20
DAY 120	72.4	36.3	87.8	39.8	25.3	17.6	VA Spec.	18
DAY 150	51.7	39.5	78.2	33.9	15.6	16.2	VA Spec.	18

Status: Spec. | Pt#: 136 | F | OS | Age: 28

CSI-T | C/L Rx: -2.75 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -2.75 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	72.4	46.1	93.3	49.7	22.2	29.5	VA Spec.	18
DAY 7	55.0	35.5	60.7	42.7	22.2	25.1	VA Spec.	17
DAY 14	49.7	24.4	47.5	25.7	15.6	25.9	VA Spec.	18
DAY 21	43.7	21.7	44.0	20.4	16.2	17.9	VA Spec.	18
DAY 28	39.2	21.9	61.2	21.9	16.5	12.7	VA Spec.	18
DAY 60	35.5	19.3	47.1	27.8	13.0	11.0	VA Spec.	18
DAY 90	45.4	32.6	63.1	35.2	21.2	23.7	VA Spec.	20
DAY 120	44.7	31.6	57.1	19.2	22.2	17.2	VA Spec.	18
DAY 150	31.6	23.8	48.2	22.9	13.6	13.6	VA Spec.	18

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 137 | F | OD | Age: 18

HCII | C/L Rx: -1.25 | B.C.: 8.8 | Dia: 14.5 | Spec Rx: -1.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	56.7	22.0	73.6	36.0	20.9	18.2	VA Spec.	18
DAY 7	50.9	17.2	56.7	29.5	12.7	14.9	VA Spec.	18
DAY 14	40.4	28.0	47.1	31.9	12.9	18.1	VA Spec.	17
DAY 21	44.0	17.2	49.7	33.1	9.2	22.0	VA Spec.	15
DAY 28	37.4	18.5	55.8	25.1	14.3	9.8	VA Spec.	15
DAY 60	31.4	17.2	41.4	23.8	11.2	11.6	VA Spec.	17
DAY 90	39.2	18.8	53.7	16.0	14.0	7.8	VA Spec.	17
DAY 120	54.1	20.4	52.5	12.2	14.1	7.1	VA Spec.	17
DAY 150	55.4	28.2	75.9	46.8	20.4	26.1	VA Spec.	15

Status: Spec. | Pt#: 137 | F | OS | Age: 18

CSI-T | C/L Rx: -1.50 | B.C.: 8.6 | Dia: 13.8 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	45.4	24.9	54.5	33.1	14.1	19.2	VA Spec.	18
DAY 7	29.1	20.7	45.7	14.7	13.1	17.4	VA Spec.	18
DAY 14	66.6	26.1	66.6	29.5	12.2	16.3	VA Spec.	17
DAY 21	50.5	16.7	53.3	25.9	9.7	14.9	VA Spec.	15
DAY 28	52.1	17.9	56.7	30.2	12.4	16.0	VA Spec.	15
DAY 60	29.3	16.1	42.3	7.9	11.5	4.0	VA Spec.	17
DAY 90	49.0	20.0	66.1	25.9	12.8	14.2	VA Spec.	17
DAY 120	50.9	20.4	93.3	31.9	14.5	18.3	VA Spec.	17
DAY 150	68.1	31.9	87.8	27.3	16.5	15.0	VA Spec.	15

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 138 | F | OD | Age: 27

PF | C/L Rx: -1.50 | B.C.: 8.7 | Dia: 14.4 | Spec Rx: -1.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	56.7	29.7	76.4	37.4	20.1	17.5	VA Spec.	15
DAY 7	41.4	20.7	53.3	29.3	15.5	14.9	VA Spec.	17
DAY 14	38.0	21.2	52.1	24.4	11.0	12.8	VA Spec.	17
DAY 21	34.7	16.1	41.1	19.3	10.4	13.4	VA Spec.	15
DAY 28	21.5	13.5	36.6	21.4	10.6	11.5	VA Spec.	17
DAY 60	43.0	20.4	53.7	21.7	13.8	10.5	VA Spec.	17
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

Status: Spec. | Pt#: 138 | F | OS | Age: 27

HCII | C/L Rx: -2.25 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -2.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	54.1	25.7	70.3	34.1	14.3	17.1	VA Spec.	17
DAY 7	39.2	16.7	51.7	20.0	11.6	6.1	VA Spec.	17
DAY 14	37.7	18.3	39.5	21.7	10.0	6.5	VA Spec.	17
DAY 21	25.5	17.0	42.0	16.2	9.7	6.1	VA Spec.	14
DAY 28	23.3	10.0	41.7	11.0	7.1	6.9	VA Spec.	17
DAY 60	57.5	18.8	62.1	21.2	10.0	8.4	VA Spec.	17
DAY 90							VA Spec.	
DAY 120							VA Spec.	
DAY 150							VA Spec.	

CONTRAST SENSITIVITY WITH SPECTACLE CORRECTION

Status: Spec. | Pt#: 139 | F | OD | Age: 26

HCII | C/L Rx: -4.25 | B.C.: 9.1 | Dia: 14.5 | Spec Rx: -4.25-0.25x020

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	59.3	52.9	73.6	41.4	14.5	20.3	VA Spec.	15
DAY 7	29.7	31.6	32.1	13.7	14.0	6.6	VA Spec.	18
DAY 14	29.5	21.2	33.1	15.6	14.5	9.6	VA Spec.	18
DAY 21	24.4	26.5	31.1	20.1	9.5	15.3	VA Spec.	18
DAY 28	33.1	30.9	49.7	26.5	30.4	18.8	VA Spec.	18
DAY 60	46.8	37.7	63.6	31.6	24.4	21.5	VA Spec.	18
DAY 90	57.5	49.4	64.3	38.0	27.5	18.1	VA Spec.	18
DAY 120	46.8	51.7	58.0	21.4	25.5	11.3	VA Spec.	20
DAY 150	48.6	55.4	61.2	22.2	19.6	21.2	VA Spec.	18

Status: Spec. | Pt#: 139 | F | OS | Age: 26

CSI-T | C/L Rx: -3.75 | B.C.: 8.9 | Dia: 14.8 | Spec Rx: -3.75-0.50x165

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	63.6	31.4	93.3	30.2	22.7	14.0	VA Spec.	18
DAY 7	24.2	30.4	28.2	14.6	15.1	11.7	VA Spec.	18
DAY 14	33.6	27.1	50.9	20.6	24.5	11.3	VA Spec.	18
DAY 21	33.6	22.6	45.4	18.2	11.7	11.1	VA Spec.	22
DAY 28	31.4	30.7	42.7	21.1	21.9	10.1	VA Spec.	20
DAY 60	42.7	29.7	63.6	46.4	28.0	14.8	VA Spec.	20
DAY 90	40.4	39.8	51.7	21.7	28.2	11.4	VA Spec.	18
DAY 120	43.3	29.1	63.6	22.6	28.8	21.1	VA Spec.	18
DAY 150	48.6	39.5	60.7	29.3	36.6	24.4	VA Spec.	18

CONTROL SUBJECTS

Status Spec. Pt# 1 M OD Age 34

Spec Rx plano-1.25x091

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	73.2	58.4	105.9	46.4	36.9	17.2	VA Spec.	15
DAY 7							VA Spec.	
DAY 14	70.3	64.1	108.8	52.5	49.0	21.5	VA Spec.	13
DAY 21							VA Spec.	
DAY 28	65.2	60.5	85.6	50.7	38.4	19.7	VA Spec.	13
DAY 60	63.6	53.7	76.2	50.1	26.7	28.8	VA Spec.	14
DAY 90	49.0	52.1	78.2	31.1	59.3	23.4	VA Spec.	14
DAY 120	78.2	55.8	62.6	49.4	54.1	19.8	VA Spec.	14
DAY 150	81.9	68.1	87.8	34.7	46.8	25.1	VA Spec.	14

Status Spec. Pt# 1 M OS Age 34

Spec Rx plano-1.75x085

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	57.1	40.4	100.0	44.3	27.8	20.4	VA Spec.	14
DAY 7							VA Spec.	
DAY 14	39.8	38.0	62.1	21.7	32.4	21.1	VA Spec.	14
DAY 21							VA Spec.	
DAY 28	42.8	43.1	72.1	35.6	36.9	24.5	VA Spec.	13
DAY 60	54.5	47.9	71.3	49.0	45.6	27.4	VA Spec.	14
DAY 90	65.6	31.4	87.1	47.1	37.6	16.3	VA Spec.	15
DAY 120	47.5	46.8	70.3	32.9	32.4	25.5	VA Spec.	14
DAY 150	61.7	59.8	96.2	39.5	56.2	18.2	VA Spec.	14

CONTROL SUBJECTS

Status Spec. Pt# 2 F OD Age 32

Spec Rx +0.50-0.25x180

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	48.2	24.5	81.9	29.1	12.0	14.3	VA Spec.	17
DAY 7							VA Spec.	
DAY 14	73.0	32.9	85.8	30.4	21.1	8.1	VA Spec.	15
DAY 21							VA Spec.	
DAY 28	54.1	36.6	72.4	34.1	19.3	17.8	VA Spec.	15
DAY 60	48.2	21.5	58.9	28.4	14.5	13.5	VA Spec.	17
DAY 90	58.0	20.3	64.6	24.0	14.6	11.4	VA Spec.	14
DAY 120	59.3	29.3	66.6	31.6	12.1	14.8	VA Spec.	15
DAY 150	49.0	35.5	58.9	25.3	15.3	9.1	VA Spec.	15

Status Spec. Pt# 2 F OS Age 32

Spec Rx +0.50 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	42.0	33.1	73.0	24.0	20.9	7.6	VA Spec.	17
DAY 7							VA Spec.	
DAY 14	48.2	26.7	78.2	25.7	13.7	8.9	VA Spec.	15
DAY 21							VA Spec.	
DAY 28	47.5	21.9	70.3	31.6	21.9	14.1	VA Spec.	15
DAY 60	38.9	22.0	50.1	20.1	11.7	6.6	VA Spec.	17
DAY 90	46.1	21.2	58.0	26.1	11.7	7.3	VA Spec.	14
DAY 120	38.3	23.6	70.3	22.7	18.9	11.0	VA Spec.	15
DAY 150	39.8	26.7	67.1	30.9	13.8	14.5	VA Spec.	15

CONTROL SUBJECTS

Status: Spec. | Pt#: 3 | F | OD | Age: 28

Spec Rx: +0.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	57.5	47.1	112.2	27.1	20.3	7.6	VA Spec.	17
DAY 7							VA Spec.	
DAY 14	68.1	49.4	110.6	37.5	35.8	16.1	VA Spec.	17
DAY 21							VA Spec.	
DAY 28	48.2	56.7	90.5	32.4	29.1	9.6	VA Spec.	15
DAY 60	73.0	46.4	73.0	30.2	42.0	26.1	VA Spec.	15
DAY 90	62.1	50.1	107.2	58.9	54.5	21.4	VA Spec.	15
DAY 120	78.8	45.7	100.8	58.9	40.4	21.7	VA Spec.	15
DAY 150	80.0	62.1	96.4	38.3	54.1	16.6	VA Spec.	15

Status: Spec. | Pt#: 3 | F | OS | Age: 28

Spec Rx: +0.25 sph

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	67.1	36.6	103.9	43.0	29.7	25.5	VA Spec.	17
DAY 7							VA Spec.	
DAY 14	73.6	36.9	83.8	49.0	33.6	10.9	VA Spec.	17
DAY 21							VA Spec.	
DAY 28	71.9	62.1	122.1	42.0	36.0	8.6	VA Spec.	15
DAY 60	87.8	32.4	104.7	42.0	26.3	24.2	VA Spec.	17
DAY 90	81.3	60.7	106.6	44.0	28.0	24.9	VA Spec.	17
DAY 120	77.6	38.9	103.1	46.1	22.0	17.4	VA Spec.	15
DAY 150	77.0	43.0	100.0	44.0	36.0	15.7	VA Spec.	15

CONTROL SUBJECTS

Status Spec. Pt# 4 M OD Age 31

Spec Rx plano-0.25x100

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	64.1	27.8	85.1	38.6	16.6	17.1	VA Spec.	14
DAY 7							VA Spec.	
DAY 14	66.1	34.9	81.3	39.2	20.9	27.3	VA Spec.	14
DAY 21							VA Spec.	
DAY 28	65.1	36.6	65.1	34.9	26.7	16.6	VA Spec.	14
DAY 60	74.1	55.0	108.0	45.4	27.1	23.1	VA Spec.	14
DAY 90	69.7	56.7	102.3	37.2	31.4	12.5	VA Spec.	14
DAY 120	71.3	48.2	80.7	45.4	34.1	18.6	VA Spec.	14
DAY 150	68.7	46.1	98.5	45.0	28.8	17.9	VA Spec.	14

Status Spec. Pt# 4 M OS Age 31

Spec Rx +0.25-0.75x060

	6.0	1.2	4.0	11.4	.7	16		
DAY 0	75.9	33.4	97.0	35.8	22.7	16.0	VA Spec.	15
DAY 7							VA Spec.	
DAY 14	69.7	48.2	89.1	42.3	33.1	24.5	VA Spec.	14
DAY 21							VA Spec.	
DAY 28	69.7	40.4	107.2	40.1	21.4	18.5	VA Spec.	14
DAY 60	62.6	56.2	108.8	43.3	34.4	20.0	VA Spec.	14
DAY 90	68.7	43.0	87.1	39.2	27.8	21.9	VA Spec.	14
DAY 120	65.1	42.7	94.0	41.1	33.9	22.0	VA Spec.	14
DAY 150	69.7	44.3	91.2	38.9	32.9	21.4	VA Spec.	14